Jan Delaval
Reference Librarian
Biotechnology & Chemical Library
CM1 1E07 – 703-308-4498
jan.delaval@uspto.gov

```
=> d his

     (FILE 'HOME' ENTERED AT 06:53:55 ON 22 OCT 2002)
               SET COST OFF

     FILE 'REGISTRY' ENTERED AT 06:55:37 ON 22 OCT 2002
L1             1 S 143011-72-7
L2             4 S 163042-96-4 OR 152918-27-9 OR 152918-18-8 OR 89705-21-5
                 ACT YOUNG832/A
                 ---------
L3   (        86)SEA FILE=HCAPLUS ABB=ON  PLU=ON  ("FISHMAN P"/AU OR "FISHMAN P
L4   (         7)SEA FILE=HCAPLUS ABB=ON  PLU=ON  ("CAN FITE BIOPHARMA LTD"/PA O
L5   (        88)SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L3 OR L4)
L6   (        34)SEA FILE=HCAPLUS ABB=ON  PLU=ON  AB MECA
L7   (       139)SEA FILE=HCAPLUS ABB=ON  PLU=ON  IB MECA
L8   (        40)SEA FILE=HCAPLUS ABB=ON  PLU=ON  CL IB MECA
L9   (       341)SEA FILE=HCAPLUS ABB=ON  PLU=ON  "ADENOSINE RECEPTORS (L) A3"/C
L10  (       707)SEA FILE=HCAPLUS ABB=ON  PLU=ON  ADENOSIN?(L)A3(L)RECEPTOR
L11  (       261)SEA FILE=HCAPLUS ABB=ON  PLU=ON  ("RECEPTORS (L) PURINERGIC P1"
L12  (       280)SEA FILE=HCAPLUS ABB=ON  PLU=ON  "ADENOSINE RECEPTORS"/CT(L)AGO
L13  (      4518)SEA FILE=HCAPLUS ABB=ON  PLU=ON  ADENOSIN?(L)RECEPTOR(L)AGONIST
L14  (       429)SEA FILE=HCAPLUS ABB=ON  PLU=ON  ADENOSIN?(L)RECEPTOR(L)AGONIST
L15  (        15)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L5 AND (L6 OR L7 OR L8 OR L9 O
L16  (         4)SEA FILE=REGISTRY ABB=ON  PLU=ON  89705-21-5 OR 152918-27-9 OR
L17  (         1)SEA FILE=REGISTRY ABB=ON  PLU=ON  120-73-0
L18  (         1)SEA FILE=REGISTRY ABB=ON  PLU=ON  58-61-7
L19  (       138)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L16
L20  (        25)SEA FILE=HCAPLUS ABB=ON  PLU=ON  2 CHLORO N6 3 IODOBENZYL ADENO
L21  (        48)SEA FILE=HCAPLUS ABB=ON  PLU=ON  N6 3 IODOBENZYL ADENOSINE 5 N
L22  (         9)SEA FILE=HCAPLUS ABB=ON  PLU=ON  N6 2 4 AMINOPHENYL ETHYL ADENO
L23  (         5)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L5 AND (L19 OR L20 OR L21 OR L
L24  (        15)SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L15 OR L23)
L25  (        12)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 AND A3
L26  (        12)SEA FILE=HCAPLUS ABB=ON  PLU=ON  CI IB MECA
L27  (        56)SEA FILE=HCAPLUS ABB=ON  PLU=ON  A3AR
L28  (         4)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L5 AND (L26 OR L27)
L29  (        12)SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L25 OR L28)
L30  (        76)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L5 NOT L29
L31  (       129)SEA FILE=REGISTRY ABB=ON  PLU=ON  (58-61-7/BI OR 152918-18-8/BI
L32  (       100)SEA FILE=REGISTRY ABB=ON  PLU=ON  L31 AND 333.446/RID
L33  (        96)SEA FILE=REGISTRY ABB=ON  PLU=ON  L32 NOT L16
L34  (        94)SEA FILE=REGISTRY ABB=ON  PLU=ON  L33 NOT (L17 OR L18)
L35            SEL  PLU=ON  L30 1- RN :      78 TERMS
L36  (        78)SEA FILE=REGISTRY ABB=ON  PLU=ON  L35
L37  (         4)SEA FILE=REGISTRY ABB=ON  PLU=ON  L36 AND 333.446/RID NOT L32
L38  (         4)SEA FILE=REGISTRY ABB=ON  PLU=ON  L37 NOT (L17 OR L18)
L39  (        98)SEA FILE=REGISTRY ABB=ON  PLU=ON  (L34 OR L38)
L40            STR
L41  (     96506)SEA FILE=REGISTRY SSS FUL L40
L42            STR
L43  (     69707)SEA FILE=REGISTRY SUB=L41 CSS FUL L42
L44  (         3)SEA FILE=REGISTRY ABB=ON  PLU=ON  L39 AND CAMP
L45  (        95)SEA FILE=REGISTRY ABB=ON  PLU=ON  L39 NOT L44
L46  (        94)SEA FILE=REGISTRY ABB=ON  PLU=ON  L45 NOT 58-55-9
L47  (        93)SEA FILE=REGISTRY ABB=ON  PLU=ON  L46 NOT 118-00-3
L48  (        84)SEA FILE=REGISTRY ABB=ON  PLU=ON  L47 NOT GUANOS?
L49  (        47)SEA FILE=REGISTRY ABB=ON  PLU=ON  L48 AND L43
L50  (        37)SEA FILE=REGISTRY ABB=ON  PLU=ON  L48 NOT L49
L51  (        19)SEA FILE=REGISTRY ABB=ON  PLU=ON  L41 AND L50
L52           66 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L49 OR L51)
                 ---------
                 ACT YOUNG832A/A
                 ---------
```

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L53 (    181680)SEA FILE=REGISTRY ABB=ON  PLU=ON  333.446/RID
L54             STR
L55       56975 SEA FILE=REGISTRY SUB=L53 CSS FUL L54
                ---------
                ACT YOUNG832C/A
                ---------
L56 (    181680)SEA FILE=REGISTRY ABB=ON  PLU=ON  333.446/RID
L57             STR
L58 (     56975)SEA FILE=REGISTRY SUB=L56 CSS FUL L57
L59             STR
L60         107 SEA FILE=REGISTRY SUB=L58 CSS FUL L59
                ---------
                ACT YOUNG832D/A
                ---------
L61 (    181680)SEA FILE=REGISTRY ABB=ON  PLU=ON  333.446/RID
L62             STR
L63 (     56975)SEA FILE=REGISTRY SUB=L61 CSS FUL L62
L64             STR
L65 (     47535)SEA FILE=REGISTRY SUB=L63 CSS FUL L64
L66             STR
L67       10896 SEA FILE=REGISTRY SUB=L65 CSS FUL L66
                ---------
                ACT YOUNG832E/A
                ---------
L68 (    181680)SEA FILE=REGISTRY ABB=ON  PLU=ON  333.446/RID
L69             STR
L70 (     56975)SEA FILE=REGISTRY SUB=L68 CSS FUL L69
L71             STR
L72 (     47535)SEA FILE=REGISTRY SUB=L70 CSS FUL L71
L73             STR
L74 (     10896)SEA FILE=REGISTRY SUB=L72 CSS FUL L73
L75             STR
L76 (     10891)SEA FILE=REGISTRY SUB=L74 CSS FUL L75
L77             STR
L78         843 SEA FILE=REGISTRY SUB=L76 CSS FUL L77
                ---------
                ACT YOUNG832F/A
                ---------
L79 (    181680)SEA FILE=REGISTRY ABB=ON  PLU=ON  333.446/RID
L80             STR
L81 (     56975)SEA FILE=REGISTRY SUB=L79 CSS FUL L80
L82             STR
L83 (     47535)SEA FILE=REGISTRY SUB=L81 CSS FUL L82
L84             STR
L85 (     10896)SEA FILE=REGISTRY SUB=L83 CSS FUL L84
L86             STR
L87 (     10891)SEA FILE=REGISTRY SUB=L85 CSS FUL L86
L88             STR
L89 (       843)SEA FILE=REGISTRY SUB=L87 CSS FUL L88
L90 (       744)SEA FILE=REGISTRY ABB=ON  PLU=ON  L89 NOT (PMS OR MNS OR IDS)/C
L91 (       640)SEA FILE=REGISTRY ABB=ON  PLU=ON  L90 NOT COMPD
L92 (       582)SEA FILE=REGISTRY ABB=ON  PLU=ON  L91 NOT SQL/FA
L93 (        75)SEA FILE=REGISTRY ABB=ON  PLU=ON  L92 AND NC>=2
L94 (        42)SEA FILE=REGISTRY ABB=ON  PLU=ON  L93 NOT MXS/CI
L95 (        27)SEA FILE=REGISTRY ABB=ON  PLU=ON  L94 NOT 58-61-7/CRN
L96 (       507)SEA FILE=REGISTRY ABB=ON  PLU=ON  L92 NOT L93
L97 (       506)SEA FILE=REGISTRY ABB=ON  PLU=ON  L96 NOT 58-61-7
L98 (       417)SEA FILE=REGISTRY ABB=ON  PLU=ON  L97 NOT (11C# OR 13C# OR 14C#
L99         444 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L95 OR L98)
                ---------
L100        444 S L99 NOT (58-55-9 OR 118-00-3 OR 958-09-8)

     FILE 'HCAPLUS' ENTERED AT 06:59:20 ON 22 OCT 2002
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L101       4269 S L1
L102       7004 S (G OR GRANULOCYT?)()(CSF OR COLON? STIMULAT? FACTOR)
L103       7098 S L101,L102
L104        138 S L2
L105         52 S (CL OR CI)()IB MECA
L106        139 S IB MECA
L107         34 S AB MECA
L108       1501 S APNEA NOT SLEEP?
L109         25 S 2 CHLORO ()(N6 OR N 6)() 3 IODOBENZ? ADENOSIN? 5 N METHYLURON
L110         48 S (N6 OR N 6)()3 IODOBENZ? ADENOSIN? 5 N METHYLURONAMIDE
L111         49 S (N6 OR N 6)()2 4 AMINOPHENYL()(ETHYLADENOSIN? OR ETHYL ADENOS
L112          7 S (N6 OR N 6)()4 AMINO 3 IODOBENZ? ADENOSIN? 5 N METHYLURONAMID
L113          1 S N 2 4 AMINOPHENYL ()(ETHYLADENOSIN? OR ETHYL ADENOSIN?)
L114         49 S (N6 OR N 6)() 2 4 AMINOPHENYL ()(ETHYLADENOSIN? OR ETHYL ADEN
L115          0 S 6 N 2 4 AMINOPHENYL()(ETHYLADENOSIN? OR ETHYL ADENOSIN?)
L116        108 S A3AR OR A2AR OR A3AR
L117      11994 S ADENOSIN?(L)RECEPTOR?
                E ADENOSINE RECEPTOR/CT
L118       2069 S E6,E7,E8,E9,E10
L119         46 S A2AAR OR A2BAR
                E E5+ALL
L120       4563 S E8,E7+NT
L121          4 S L103 AND L104-L115
L122         18 S L103 AND L116-L120
                E LEUKOPEN
L123       3002 S E4-E9,E12
                E LEUCOPEN
L124       1037 S E4-E7,E11
                E LEUKOCYTOPEN
L125        970 S E2,E4,E5,E8
                E LEUCOCYTOPEN
L126         28 S E4
                E LEUKOCYTOPEN/CT
                E E4+ALL
L127        807 S E3
L128       3392 S E3/BI OR E4/BI OR E5/BI OR E6/BI
L129        164 S L103 AND L123-L128
L130          3 S L121,L122 AND L129
                E BONE MARROW/CT
                E E3+ALL
L131      21852 S E16+NT
L132      51298 S E16/BI
                E E20+ALL
L133      31615 S E6+NT
                E E30+ALL
                E E22+ALL
L134      19391 S E4,E3+NT
L135      16238 S E3/BI
                E E10+ALL
L136      22302 S E5+NT
                E E29+ALL
L137       1555 S E4
                E E13+ALL
L138       2838 S E5,E6,E4+NT
L139          9 S L104-L115 AND L123-L129
L140         13 S L104-L115 AND L131-L138
L141        129 S L116-L120 AND L123-L128,L131-L138
L142       5496 S L52,L60,L99

     FILE 'REGISTRY' ENTERED AT 07:16:53 ON 22 OCT 2002
L143      10433 S L67,L78 NOT L52,L60,L99
L144      10432 S L143 NOT (58-55-9 OR 118-00-3 OR 958-09-8 OR 58-61-7)
L145      10431 S L144 NOT 53-84-9
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L146       2046 S L145 NOT (P/ELS OR SQL/FA OR (PMS OR MNS OR MXS OR IDS)/CI)

     FILE 'HCAPLUS' ENTERED AT 07:18:29 ON 22 OCT 2002
L147        5695 S L146
L148       10759 S L142,L147
L149          57 S L148 AND L103
L150        2126 S L148 AND L116-L120
L151         335 S L148 AND L123-L128,L131-L138
L152          18 S L150 AND L151
L153          37 S L149 AND L150,L151
L154           4 S L152 AND L153
L155          36 S L121,L122,L130,L139,L140,L154
L156          53 S L149,L153 NOT L155
L157         114 S L141 NOT L155,L156
                 E CAN/CS,PA
                 E CAN-FIT/CS,P
                 E CAN-FIT/CS,PA
                 E CAN FIT/CS,PA
L158           7 S E5-E10
                 E FISHMAN P/AU
L159          86 S E3-E6,E15
L160           6 S L158,L159 AND L103
L161           6 S L160 AND L155-L157
L162         136 S L155-L157 AND (PD<=19990910 OR PRD<=19990910 OR AD<=19990910)
L163          26 S L155 AND L162
L164           6 S L163 AND (HEMATOPO? OR CANCER OR BONE MARROW OR CELL PROLIFER
L165          25 S L162 AND L156
L166          15 S L165 AND (MARROW OR RANDOMIZ? OR MYELO? OR LEUKEM?)/TI
L167           8 S L166 NOT FLAG/TI
                 SEL DN AN 2 3 5 8
L168           4 S L167 NOT E1-E12
L169          13 S L161,L164,L168
L170          85 S L162 NOT L163-L169
L171          34 S L170 AND (1 OR 15 OR 63)/SC
L172          13 S L171 AND (MAST CELL OR PROLIFERAT? OR HEMATOPO? OR EXPANSION
                 SEL DN AN 1 3
L173           6 S E3-E18
L174          19 S L169,L173 AND L101-L142,L147-L173
                 SEL HIT RN

     FILE 'REGISTRY' ENTERED AT 07:39:39 ON 22 OCT 2002
L175          11 S E19-E29
L176           1 S L175 AND L1
L177          10 S L175 NOT L176

=> fil reg

FILE 'REGISTRY' ENTERED AT 07:40:25 ON 22 OCT 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   20 OCT 2002  HIGHEST RN 463296-69-7
DICTIONARY FILE UPDATES:  20 OCT 2002  HIGHEST RN 463296-69-7

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.
```

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> d ide can l176

L176 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN **143011-72-7** REGISTRY
CN Colony-stimulating factor, granulocyte (9CI) (CA INDEX NAME)
OTHER NAMES:
CN G-CSF
CN Granocyte
CN Granulocyte colony-stimulating factor
MF Unspecified
CI COM, MAN
SR CA
LC STN Files: BIOBUSINESS, BIOSIS, CA, CANCERLIT, CAPLUS, CEN, CHEMCATS, CIN, MEDLINE, MRCK*, PHAR, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
4262 REFERENCES IN FILE CA (1962 TO DATE)
105 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4269 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:253043

REFERENCE 2: 137:246548

REFERENCE 3: 137:246329

REFERENCE 4: 137:246314

REFERENCE 5: 137:246133

REFERENCE 6: 137:244062

REFERENCE 7: 137:241838

REFERENCE 8: 137:241829

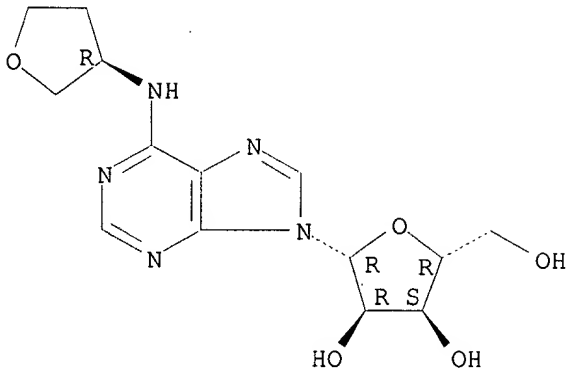
REFERENCE 9: 137:241731

REFERENCE 10: 137:237705

=> d ide can l177 tot

L177 ANSWER 1 OF 10 REGISTRY COPYRIGHT 2002 ACS
RN **204512-90-3** REGISTRY
CN Adenosine, N-[(3R)-tetrahydro-3-furanyl]- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN CVT 510
CN Tecadenoson
FS STEREOSEARCH
DR 343921-68-6
MF C14 H19 N5 O5
SR CA
LC STN Files: ADISINSIGHT, BIOSIS, CA, CAPLUS, DRUGNL, DRUGPAT, DRUGUPDATES, PHAR, SYNTHLINE, TOXCENTER, USPATFULL

Absolute stereochemistry.



HIV cmpds 1d
refs 1-19, set L174

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

14 REFERENCES IN FILE CA (1962 TO DATE)
14 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:163189

REFERENCE 2: 136:257289

REFERENCE 3: 136:241669

REFERENCE 4: 136:128795

REFERENCE 5: 135:266911

REFERENCE 6: 135:132114

REFERENCE 7: 135:33626

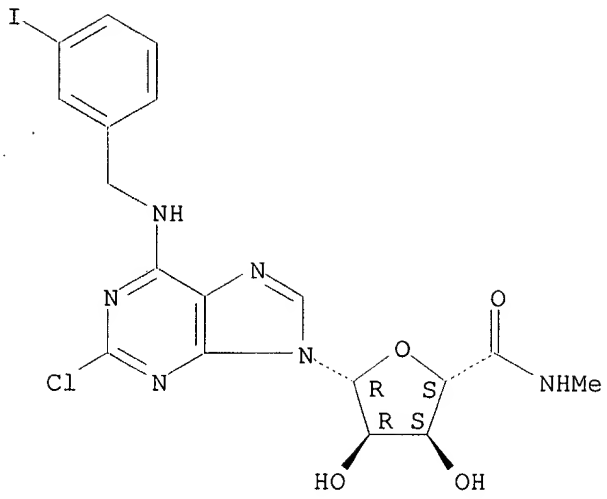
REFERENCE 8: 135:19874

REFERENCE 9: 135:19873

REFERENCE 10: 135:5771

L177 ANSWER 2 OF 10 REGISTRY COPYRIGHT 2002 ACS
RN **163042-96-4** REGISTRY
CN .beta.-D-Ribofuranuronamide, 1-[2-chloro-6-[[(3-iodophenyl)methyl]amino]-9H-purin-9-yl]-1-deoxy-N-methyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 2-Chloro-N6-(3-iodobenzyl)adenosine-5'-N-methyluronamide
CN Cl-IB-MECA
FS STEREOSEARCH
MF C18 H18 Cl I N6 O4
SR CA
LC STN Files: ADISINSIGHT, BIOSIS, CA, CANCERLIT, CAPLUS, CHEMCATS, CSCHEM, MEDLINE, TOXCENTER, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

43 REFERENCES IN FILE CA (1962 TO DATE)
43 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:163843

REFERENCE 2: 137:136577

REFERENCE 3: 137:88436

REFERENCE 4: 136:380449

REFERENCE 5: 136:319688

REFERENCE 6: 136:273473

REFERENCE 7: 136:272934

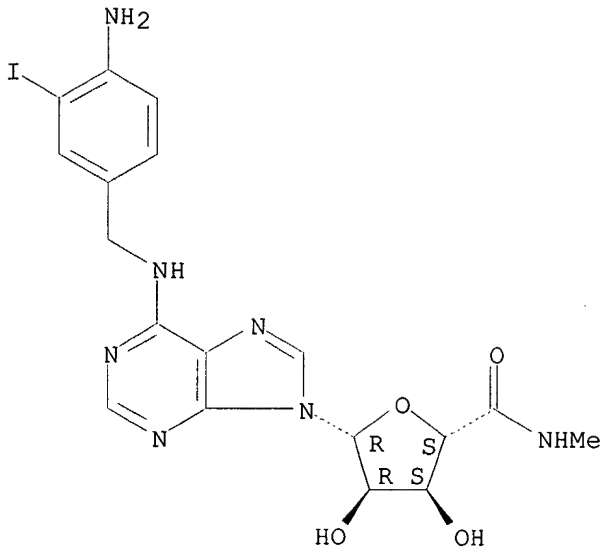
REFERENCE 8: 136:257615

REFERENCE 9: 136:242084

REFERENCE 10: 136:161304

L177 ANSWER 3 OF 10 REGISTRY COPYRIGHT 2002 ACS
RN **152918-27-9** REGISTRY
CN .beta.-D-Ribofuranuronamide, 1-[6-[[(4-amino-3-iodophenyl)methyl]amino]-9H-purin-9-yl]-1-deoxy-N-methyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN AB-MECA
FS STEREOSEARCH
MF C18 H20 I N7 O4
SR CA
LC STN Files: BIOSIS, CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

20 REFERENCES IN FILE CA (1962 TO DATE)
20 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:163843

REFERENCE 2: 137:136577

REFERENCE 3: 137:88436

REFERENCE 4: 136:380449

REFERENCE 5: 136:48571

REFERENCE 6: 134:231860

REFERENCE 7: 133:261543

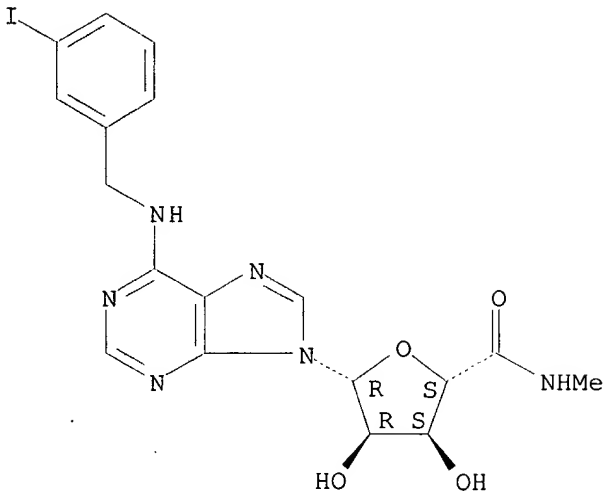
REFERENCE 8: 130:20187

REFERENCE 9: 130:10309

REFERENCE 10: 129:228699

L177 ANSWER 4 OF 10 REGISTRY COPYRIGHT 2002 ACS
RN **152918-18-8** REGISTRY
CN .beta.-D-Ribofuranuronamide, 1-deoxy-1-[6-[[(3-iodophenyl)methyl]amino]-9H-purin-9-yl]-N-methyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN IB-MECA
CN N6-(3-Iodobenzyl)adenosine-5'-N-methyluronamide
FS STEREOSEARCH
DR 215462-30-9
MF C18 H19 I N6 O4
SR CA
LC STN Files: ADISINSIGHT, ADISNEWS, BIOBUSINESS, BIOSIS, CA, CANCERLIT, CAPLUS, CASREACT, CHEMCATS, CSCHEM, MEDLINE, TOXCENTER, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

75 REFERENCES IN FILE CA (1962 TO DATE)
75 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:163843

REFERENCE 2: 137:136577

REFERENCE 3: 137:103775

REFERENCE 4: 137:88436

REFERENCE 5: 137:57230

REFERENCE 6: 136:380449

REFERENCE 7: 136:365554

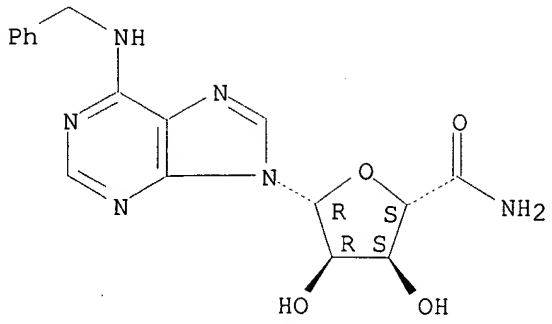
REFERENCE 8: 136:350750

REFERENCE 9: 136:161304

REFERENCE 10: 136:145239

L177 ANSWER 5 OF 10 REGISTRY COPYRIGHT 2002 ACS
RN **152918-14-4** REGISTRY
CN .beta.-D-Ribofuranuronamide, 1-deoxy-1-[6-[(phenylmethyl)amino]-9H-purin-9-yl]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H18 N6 O4
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
5 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:88436

REFERENCE 2: 134:231860

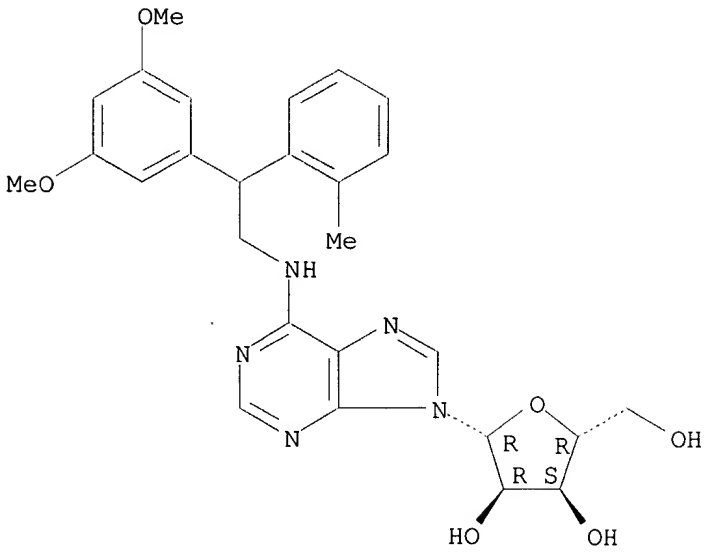
REFERENCE 3: 129:109311

REFERENCE 4: 124:225

REFERENCE 5: 120:289415

L177 ANSWER 6 OF 10 REGISTRY COPYRIGHT 2002 ACS
RN **120442-40-2** REGISTRY
CN Adenosine, N-[2-(3,5-dimethoxyphenyl)-2-(2-methylphenyl)ethyl]- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN CGS 24012
CN DPMA
CN PD 125944
FS STEREOSEARCH
MF C27 H31 N5 O6
SR CA
LC STN Files: ADISINSIGHT, ADISNEWS, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CHEMCATS, CIN, DDFU, DRUGU, EMBASE, MEDLINE, PIRA, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

44 REFERENCES IN FILE CA (1962 TO DATE)
44 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:163843

REFERENCE 2: 135:221151

REFERENCE 3: 135:162508

REFERENCE 4: 135:43868

REFERENCE 5: 134:231860

REFERENCE 6: 134:217113

REFERENCE 7: 134:110841

REFERENCE 8: 133:359476

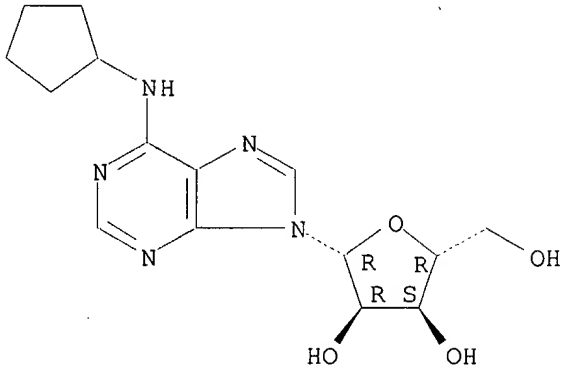
REFERENCE 9: 133:217854

REFERENCE 10: 130:247042

L177 ANSWER 7 OF 10 REGISTRY COPYRIGHT 2002 ACS
RN **41552-82-3** REGISTRY
CN Adenosine, N-cyclopentyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN CPA
CN N-Cyclopentyladenosine
CN N6-cyclopentyladenosine
CN N6-Cyclopentyladenosine
CN UK 80882
FS STEREOSEARCH
MF C15 H21 N5 O4
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CHEMCATS, CSCHEM, DDFU, DRUGU, EMBASE, IPA, MEDLINE, MSDS-OHS, TOXCENTER, USPATFULL

(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

469 REFERENCES IN FILE CA (1962 TO DATE)
9 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
469 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:243504

REFERENCE 2: 137:217173

REFERENCE 3: 137:211198

REFERENCE 4: 137:210830

REFERENCE 5: 137:195896

REFERENCE 6: 137:163843

REFERENCE 7: 137:150526

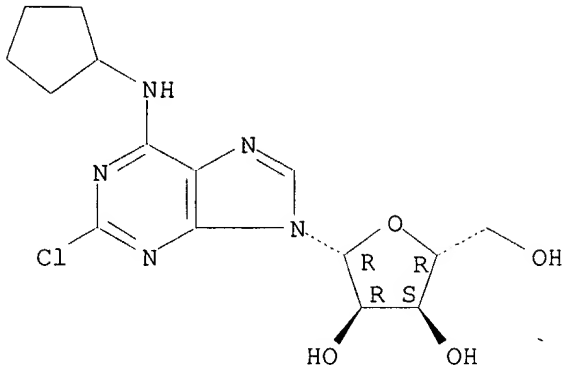
REFERENCE 8: 137:150259

REFERENCE 9: 137:135364

REFERENCE 10: 137:134944

L177 ANSWER 8 OF 10 REGISTRY COPYRIGHT 2002 ACS
RN **37739-05-2** REGISTRY
CN Adenosine, 2-chloro-N-cyclopentyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 2-Chloro-N6-cyclopentyladenosine
CN 2-Chloro-N6-cyclopentyladenosine
CN CCPA
FS STEREOSEARCH
DR 172613-66-0
MF C15 H20 Cl N5 O4
LC STN Files: BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CEN, CHEMCATS, CIN, EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, PHAR, PIRA, PROMT, RTECS*, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

139 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
139 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:226896

REFERENCE 2: 137:164033

REFERENCE 3: 137:119953

REFERENCE 4: 137:103775

REFERENCE 5: 137:28514

REFERENCE 6: 136:319688

REFERENCE 7: 136:257616

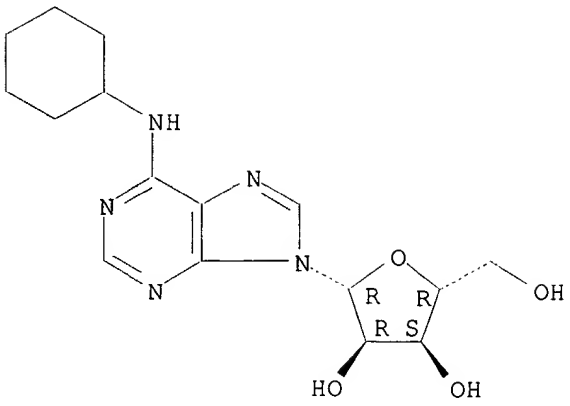
REFERENCE 8: 136:257289

REFERENCE 9: 136:145101

REFERENCE 10: 136:15094

L177 ANSWER 9 OF 10 REGISTRY COPYRIGHT 2002 ACS
RN **36396-99-3** REGISTRY
CN Adenosine, N-cyclohexyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN CHA
CN Cyclohexyladenosine
CN N-Cyclohexyladenosine
CN N6-Cyclohexyladenosine
FS STEREOSEARCH
MF C16 H23 N5 O4
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CHEMCATS, CSCHEM, DDFU, DRUGU, EMBASE, MEDLINE, MSDS-OHS, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

570 REFERENCES IN FILE CA (1962 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
570 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:163843

REFERENCE 2: 137:163757

REFERENCE 3: 137:103775

REFERENCE 4: 137:88259

REFERENCE 5: 137:18547

REFERENCE 6: 136:335498

REFERENCE 7: 136:257289

REFERENCE 8: 136:226629

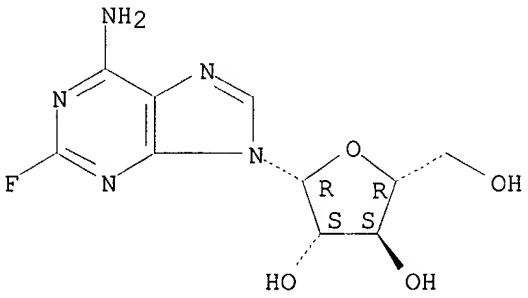
REFERENCE 9: 136:217007

REFERENCE 10: 136:177829

L177 ANSWER 10 OF 10 REGISTRY COPYRIGHT 2002 ACS
RN **21679-14-1** REGISTRY
CN 9H-Purin-6-amine, 9-.beta.-D-arabinofuranosyl-2-fluoro- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Adenine, 9-.beta.-D-arabinofuranosyl-2-fluoro- (8CI)
OTHER NAMES:
CN 2-Fluoro-9-.beta.-D-arabinofuranosyladenine
CN 9-.beta.-D-Arabinofuranosyl-2-fluoroadenine
CN 9-.beta.-D-Arabinosyl-2-fluoroadenine
CN F-ara-A
CN Fludarabine
CN NSC 118218
CN NSC 118218H
FS STEREOSEARCH
MF C10 H12 F N5 O4
LC STN Files: ADISINSIGHT, ADISNEWS, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DIOGENES, DRUGPAT, DRUGU, DRUGUPDATES, EMBASE, IPA, MEDLINE, MRCK*, PHAR, PROMT, RTECS*, SYNTHLINE, TOXCENTER,

USAN, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

530 REFERENCES IN FILE CA (1962 TO DATE)
10 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
532 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:247550

REFERENCE 2: 137:231369

REFERENCE 3: 137:227069

REFERENCE 4: 137:226367

REFERENCE 5: 137:226341

REFERENCE 6: 137:226339

REFERENCE 7: 137:226332

REFERENCE 8: 137:226313

REFERENCE 9: 137:226114

REFERENCE 10: 137:215809

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 07:40:44 ON 22 OCT 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 22 Oct 2002 VOL 137 ISS 17
FILE LAST UPDATED: 21 Oct 2002 (20021021/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> d all hitstr tot l174

L174 ANSWER 1 OF 19 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:469221 HCAPLUS
TI A3 **adenosine receptor** as a target for cancer therapy
AU **Fishman, Pnina**; Bar-Yehuda, Sara; Madi, Lea; Cohn, Ilan
CS Laboratory of Clinical and Tumor Immunology, The Felsenstein Medical Research Center, Rabin Medical Center, Tel-Aviv University, Petach Tikva, 49100, Israel
SO Anti-Cancer Drugs (2002), 13(5), 437-443
CODEN: ANTDEV; ISSN: 0959-4973
PB Lippincott Williams & Wilkins
DT Journal
LA English
CC 1 (Pharmacology)
AB Targeting the A3 **adenosine receptor** (**A3AR**) by **adenosine** or a synthetic agonist to this **receptor** (**IB-MECA** and **CI-IB-MECA**) results in a differential effect on tumor and on normal cells. Both the **adenosine** and the agonists inhibit the growth of various tumor cell types such as melanoma, colon or prostate carcinoma and lymphoma. This effect is specific and is exerted on tumor cells only. Moreover, exposure of peripheral blood mononuclear cells to **adenosine** or the agonists leads to the induction of **granulocyte colony stimulating factor** (**G-CSF**) prodn. When given orally to mice, the agonists suppress the growth of melanoma, colon and prostate carcinoma in these animals, while inducing a myeloprotective effect via the induction of **G-CSF** prodn. The de-regulation of the Wnt signaling pathway was found to be involved in the anticancer effect. **Receptor** activation induces inhibition of adenylyl cyclase with a subsequent decrease in the level of protein kinase A and protein kinase B/Akt leading to activation of glycogen synthase kinase-3.beta., a key element in the Wnt pathway. The oral bioavailability of the synthetic **A3AR** agonists, and their induced systemic anticancer and myeloprotective effect, renders them potentially useful in three different modes of treatment: as a standalone anticancer treatment, in combination with chemotherapy to enhance its therapeutic index and myelprotection. It is evident that use of the **A3AR** agonist for increasing the therapeutic index of chemotherapy may also invariably give rise to myeloprotection and vice versa. The **A3AR** agonists are thus a promising new class of agents for cancer therapy.
RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Bar-Yehuda, S; Clin Exp Metast 1999, V17, P531 HCAPLUS
(2) Bar-Yehuda, S; Neoplasia 2001, V3, P125 HCAPLUS
(3) Bowlin, T; Cell Mol Biol 1997, V43, P345 HCAPLUS
(4) Djaldetti, M; Clin Exp Metast 1996, V14, P189 HCAPLUS

(5) Fishman, P; Cancer Res 1998, V58, P3181 HCAPLUS
(6) Fishman, P; Cancer Res 1998, V58, P3181 HCAPLUS
(7) Fishman, P; Eur J Cancer 2000, V36, P1452 HCAPLUS
(8) Fishman, P; J Cell Physiol 2000, V183, P393 HCAPLUS
(9) Fishman, P; Oncogene, in press 2002
(10) Gessi, S; Br J Pharmacol 2001, V134, P116 HCAPLUS
(11) Jacobson, K; Drugs Fut 1995, V20, P689
(12) Jacobson, K; J Biol Chem 2000, V275, P30272 HCAPLUS
(13) Liu, G; Cardiovasc Res 1994, V28, P1057 HCAPLUS
(14) Merighi, S; Br J Pharmacol 2001, V134, P1215 HCAPLUS
(15) Olah, M; Pharmacol Ther 2000, V85, P55 HCAPLUS
(16) Palmer, T; Mol Pharmacol 1997, V52, P632 HCAPLUS
(17) Palmer, T; Mol Pharmacol 2000, V57, P539 HCAPLUS
(18) Poulsen, S; Bioorg Med Chem 1998, V6, P619 HCAPLUS
(19) Shneyvays, V; J Mol Cell Cardiol 2001, V33, P1249 HCAPLUS
(20) Suh, B; Br J Pharmacol 2001, V134, P132 HCAPLUS
(21) Trincavelli, M; J Neurochem 2000, V75, P1493 HCAPLUS
(22) Von Lubitz, D; Ann NY Acad Sci 2001, V939, P85 HCAPLUS
(23) Zhao, Z; Microvasc Res 2002, V63, P61 HCAPLUS

L174 ANSWER 2 OF 19 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:241343 HCAPLUS
DN 136:257289
TI Pharmaceutical use of adenosine agonists for inducing **bone marrow cell proliferation**
IN **Fishman, Pnina**; Cohn, Ilan
PA Israel
SO U.S. Pat. Appl. Publ., 12 pp., Cont.-in-part of U.S. Ser. No. 782,259.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K031-7076
NCL 514046000
CC 1-12 (Pharmacology)
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	US 2002037871	A1	20020328	US 2001-871963	20010604	<--
	WO 2000040251	A1	20000713	WO 2000-IL14	20000107	<--
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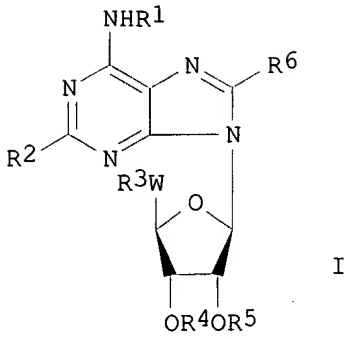
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
	US 2001031742	A1	20011018	US 2001-782259	20010214	<--
PRAI	IL 1999-127947	A	19990107	<--		
	WO 2000-IL14	W	20000107			
	US 2001-700744	A2	20010109			
	US 2001-782259	A2	20010214			

OS MARPAT 136:257289
GI



I

AB The present invention relates to a method for inducing proliferation of the hematopoietic system, in particular, of **bone marrow** cells, comprising administering to a subject an effective amt. of an **adenosine** A1 **receptor** agonist. The method of the invention may be utilized in a variety of clin. situations where such proliferation is therapeutically beneficial. The active ingredient within the pharmaceutical compn. of the invention may be a compd. of general formula I (R1 represents a lower alkyl, substituted or unsubstituted cycloalkyl, hydroxy or hydroxyalkyl, etc.; R2 represents hydrogen, halogen, substituted or unsubstituted lower alkyl or alkenyl, lower haloalkyl or alkenyl cyano, etc.; W represents the group -OCH2-, -NHCH2-, -SCH2- or -NH(C:O)-; R3, R4 and R5 represent independently hydrogen, lower alkyl or lower alkenyl, branched or unbranched C1-C12alkanoyl, benzoyl or substituted benzoyl, etc.; and R6 represents a hydrogen or halogen atom) or any other compd. or substance which specifically binds to and/or activates the A1 **adenosine receptor** and acts as an agonist to the **receptor**'s natural ligand.

ST **adenosine** A1 agonist **bone marrow** cell proliferation induction; **leukopenia** prevention **adenosine** A1 **receptor** agonist; **hematopoiesis** induction **adenosine** A1 **receptor** agonist

IT Purinoceptor agonists
(A1; adenosine agonists for inducing **bone marrow** cell proliferation)

IT **Adenosine receptors**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**A1**; **adenosine** agonists for inducing **bone marrow** cell proliferation)

IT **Bone marrow**
Cell proliferation
Drug interactions
Leukocytopenia
(adenosine agonists for inducing **bone marrow** cell proliferation)

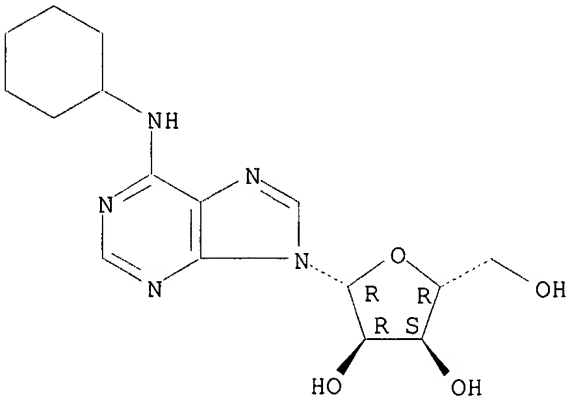
IT Toxicity
(drug, **leukopenia** in; adenosine agonists for inducing **bone marrow** cell proliferation)

IT **Hematopoiesis**
(induction of; adenosine agonists for inducing **bone marrow** cell proliferation)

IT Antipsychotics
Antitumor agents
Chemotherapy
Radiotherapy
Tranquilizers
(**leukopenia** from; adenosine agonists for inducing **bone marrow** cell proliferation)

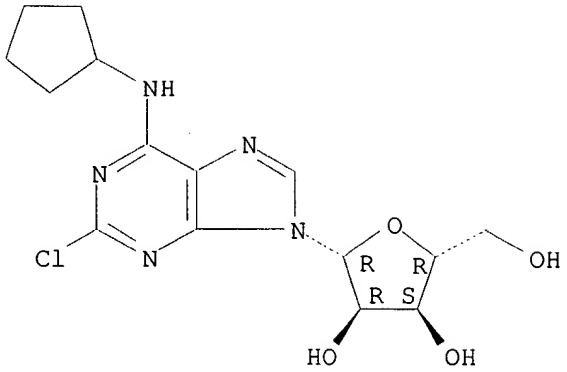
IT Neoplasm
(**leukopenia** in; adenosine agonists for inducing **bone marrow** cell proliferation)
IT Agranulocytosis
(neutropenia; adenosine agonists for inducing **bone marrow** cell proliferation)
IT 58-61-7D, Adenosine, derivs. **36396-99-3**, Adenosine, N-cyclohexyl- **37739-05-2**, 2-Chloro-N6-cyclopentyladenosine **41552-82-3**, N6-Cyclopentyladenosine **204512-90-3**
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(adenosine agonists for inducing **bone marrow** cell proliferation)
IT **143011-72-7, G-CSF**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(induction of; adenosine agonists for inducing **bone marrow** cell proliferation)
IT 50-18-0, Cyclophosphamide
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**leukopenia** from; adenosine agonists for inducing **bone marrow** cell proliferation)
IT **36396-99-3**, Adenosine, N-cyclohexyl- **37739-05-2**, 2-Chloro-N6-cyclopentyladenosine **41552-82-3**, N6-Cyclopentyladenosine **204512-90-3**
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(adenosine agonists for inducing **bone marrow** cell proliferation)
RN 36396-99-3 HCAPLUS
CN Adenosine, N-cyclohexyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



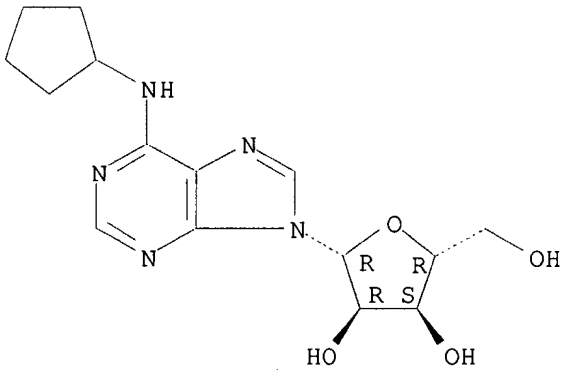
RN 37739-05-2 HCAPLUS
CN Adenosine, 2-chloro-N-cyclopentyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



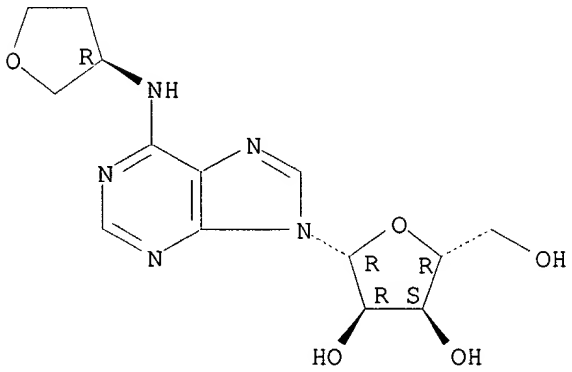
RN 41552-82-3 HCAPLUS
CN Adenosine, N-cyclopentyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 204512-90-3 HCAPLUS
CN Adenosine, N-[(3R)-tetrahydro-3-furanyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **143011-72-7, G-CSF**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(induction of; adenosine agonists for inducing **bone marrow** cell proliferation)
RN 143011-72-7 HCAPLUS
CN Colony-stimulating factor, granulocyte (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L174 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:763522 HCAPLUS
DN 135:283233
TI Pharmaceutical use of adenosine agonists for inducing **bone marrow cell proliferation**
IN **Fishman, Pnina**; Cohn, Ilan
PA Israel
SO U.S. Pat. Appl. Publ., 10 pp., Cont.-in-part of U.S. Ser. No. 700,744.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K031-7105
NCL 514045000
CC 1-12 (Pharmacology)
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2001031742	A1	20011018	US 2001-782259	20010214 <--
	WO 2000040251	A1	20000713	WO 2000-IL14	20000107 <--
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	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
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PRAI	IL 1999-127947	A	19990107 <--		
	WO 2000-IL14	P	20000107		
	US 2001-700744	A2	20010109		
	US 2001-782259	A2	20010214		

OS MARPAT 135:283233
AB A method is provided for inducing proliferation of **bone marrow** cells in a subject, compromising administering an effective amt. of an **adenosine** A1 **receptor** agonist. Also provided is a method for preventing redn. in level of leukocytes in a subject as a result of a treatment comprising administering to the individual an effective amt. of an **adenosine** A1 **receptor** agonist. In addn., the invention provides a method of treatment of an individual comprising administering to the subject a therapeutic drug in combination with an **adenosine** A1 **receptor** agonist.
ST **adenosine** A1 agonist **bone marrow** cell proliferation induction; **leukopenia** prevention **adenosine** A1 **receptor** agonist
IT **Adenosine receptors**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**A1**; **adenosine** agonists for inducing **bone marrow** cell proliferation)
IT Antipsychotics
Antitumor agents
Bone marrow
Cell proliferation
Chemotherapy
Drug interactions
Drugs
Leukocytopenia
Radiotherapy
Tranquilizers

(adenosine agonists for inducing **bone marrow** cell proliferation)

IT Toxicity
(drug; adenosine agonists for inducing **bone marrow** cell proliferation)

IT Agranulocytosis
(neutropenia; adenosine agonists for inducing **bone marrow** cell proliferation)

IT 50-18-0, Cyclophosphamide
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(adenosine agonists for inducing **bone marrow** cell proliferation)

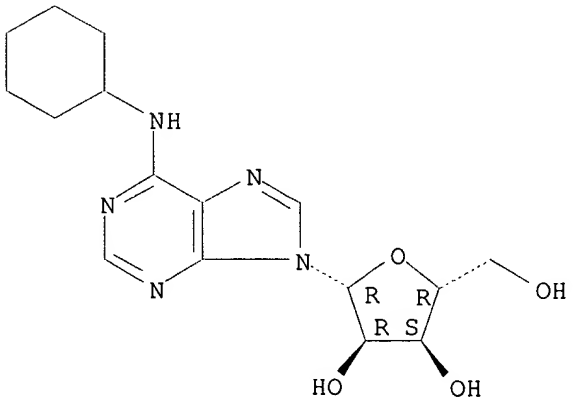
IT 58-61-7D, Adenosine, derivs., biological studies **36396-99-3** **37739-05-2**, 2-Chloro-N6-cyclopentyladenosine **41552-82-3**, N6-Cyclopentyladenosine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(adenosine agonists for inducing **bone marrow** cell proliferation)

IT **143011-72-7, G-CSF**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(adenosine agonists for inducing **bone marrow** cell proliferation)

IT **36396-99-3** **37739-05-2**, 2-Chloro-N6-cyclopentyladenosine **41552-82-3**, N6-Cyclopentyladenosine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(adenosine agonists for inducing **bone marrow** cell proliferation)

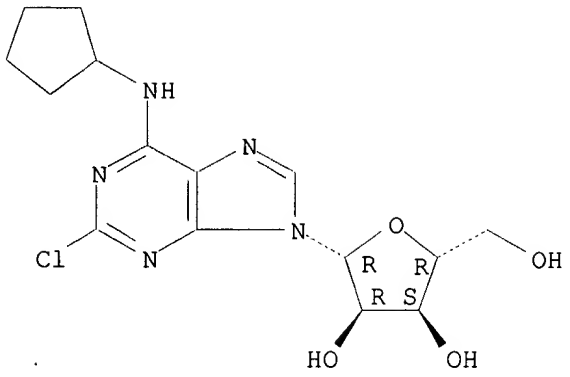
RN 36396-99-3 HCAPLUS
CN Adenosine, N-cyclohexyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



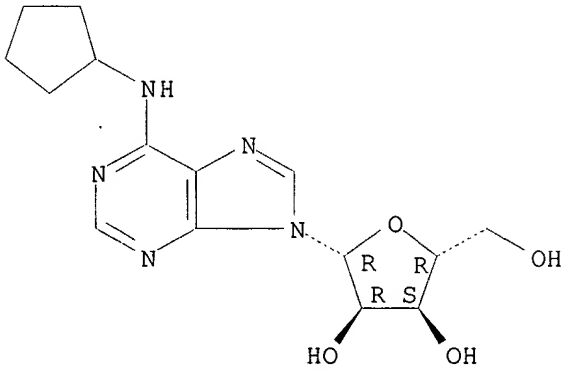
RN 37739-05-2 HCAPLUS
CN Adenosine, 2-chloro-N-cyclopentyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 41552-82-3 HCAPLUS
CN Adenosine, N-cyclopentyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **143011-72-7, G-CSF**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(adenosine agonists for inducing **bone marrow** cell proliferation)
RN 143011-72-7 HCAPLUS
CN Colony-stimulating factor, granulocyte (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L174 ANSWER 4 OF 19 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:698571 HCAPLUS
DN 136:144762
TI The A3 **Adenosine Receptor** as a New Target for Cancer Therapy and Chemoprotection
AU **Fishman, Pnina**; Bar-Yehuda, Sara; Barer, Faina; Madi, Lea; Multani, Asha S.; Pathak, Sen
CS Laboratory of Clinical and Tumor Immunology, The Felsenstein Medical Research Center, Rabin Medical Center, Tel-Aviv University Sackler Faculty of Medicine, Petach-Tikva, 49100, Israel
SO Experimental Cell Research (2001), 269(2), 230-236
CODEN: ECREAL; ISSN: 0014-4827
PB Academic Press
DT Journal
LA English
CC 1-6 (Pharmacology)
AB **Adenosine**, a purine nucleoside, acts as a regulatory mol., by

binding to specific G-protein-coupled A1, A2A, A2B, and A3 cell surface **receptors**. We have recently demonstrated that **adenosine** induces a differential effect on tumor and normal cells. While inhibiting in vitro tumor cell growth, it stimulates **bone marrow** cell proliferation. This dual activity was mediated through the A3 **adenosine receptor**. This study showed that a synthetic agonist to the A3 **adenosine receptor**, 2-chloro-N6-(3-iodobenzyl)-**adenosine**-5'-N- methyl-uronamide (**Cl-IB-MECA**), at nanomolar concns., inhibited tumor cell growth through a cytostatic pathway, i.e., induced an increase no. of cells in the G0/G1 phase of the cell cycle and decreased the telomeric signal. Interestingly, **Cl-IB-MECA** stimulates murine **bone marrow** cell proliferation through the induction of **granulocyte-colony-stimulating factor**. Oral administration of **Cl -IB-MECA** to melanoma-bearing mice suppressed the development of melanoma lung metastases (60.8.+-.6.5% inhibition). In combination with cyclophosphamide, a synergistic anti-tumor effect was achieved (78.5.+-.9.1% inhibition). Furthermore, **Cl-IB -MECA** prevented the cyclophosphamide-induced myelotoxic effects by increasing the no. of white blood cells and the percentage of neutrophils, demonstrating its efficacy as a chemoprotective agent. We conclude that A3 **adenosine receptor** agonist, **Cl-IB-MECA**, exhibits systemic anticancer and chemoprotective effects. (c) 2001 Academic Press.

ST chloroiodobenzyladenosinemethyluronamide cyclophosphamide antitumor **adenosine receptor** chemoprotectant cell cycle

IT Antitumor agents
Cytoprotective agents
Neutrophil
(A3 **adenosine receptor** as a new target for cancer therapy and chemoprotection)

IT **Adenosine receptors**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**A3; A3 adenosine receptor** as a new target for cancer therapy and chemoprotection)

IT Interphase (cell cycle)
(G0-phase; A3 **adenosine receptor** as a new target for cancer therapy and chemoprotection)

IT Interphase (cell cycle)
(G1-phase; A3 **adenosine receptor** as a new target for cancer therapy and chemoprotection)

IT Antitumor agents
(lung, metastasis; A3 **adenosine receptor** as a new target for cancer therapy and chemoprotection)

IT Antitumor agents
(melanoma; A3 **adenosine receptor** as a new target for cancer therapy and chemoprotection)

IT Lung, neoplasm
(metastasis, inhibitors; A3 **adenosine receptor** as a new target for cancer therapy and chemoprotection)

IT Drug interactions
(synergistic; A3 **adenosine receptor** as a new target for cancer therapy and chemoprotection)

IT 50-18-0, Cyclophosphamide **163042-96-4**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(A3 **adenosine receptor** as a new target for cancer therapy and chemoprotection)

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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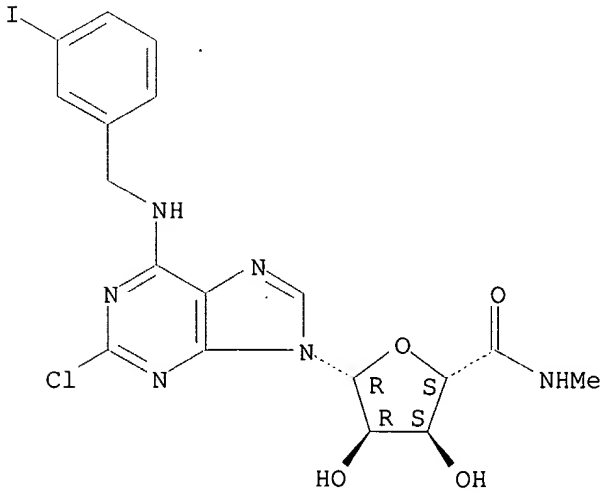
IT **163042-96-4**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(A3 **adenosine receptor** as a new target for cancer therapy and chemoprotection)

RN 163042-96-4 HCAPLUS

CN .beta.-D-Ribofuranuronamide, 1-[2-chloro-6-[[(3-iodophenyl)methyl]amino]-9H-purin-9-yl]-1-deoxy-N-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L174 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:208100 HCAPLUS
DN 134:231860

TI Pharmaceutical compositions comprising an **adenosine receptor** agonist or antagonist for **cancer** treatment

IN **Fishman, Pnina**

PA **Can-Fite Technologies Ltd., Israel**

SO PCT Int. Appl., 68 pp.
CODEN: PIXXD2

present application

DT Patent

LA English

IC ICM A61K031-00
ICS A61K031-7052; A61K031-7076; A61K031-708; A61K031-706; A61P039-00; A61P035-00

CC 1-6 (Pharmacology)
Section cross-reference(s): 63

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001019360	A2	20010322	WO 2000-IL550	20000908 <--
WO 2001019360	A3	20020919		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI IL 1999-131864 A 19990910 <--
IL 1999-133680 A 19991223

OS MARPAT 134:231860

AB **Adenosine receptor** agonists and antagonists, particularly an agonist which binds to the A3 **adenosine receptor**, are used for induction of prodn. or secretion of **G-CSF** within the body, prevention or treatment of toxic side effects of a drug or prevention or treatment of **leukopenia**, particularly drug-induced **leukopenias**, and inhibition of abnormal cell growth and proliferation. For example, a marked inhibition of tumor growth was obsd. in nude mice with established HCT-116 human colon carcinoma treated with 5-fluorouracil (5-FU, 30 mg/kg for 5 days), 2-chloro-N6-(2-iodobenzyl)-**adenosine**-5'-N-methyluronamide (**Cl-IB-MECA**, 6 mg/kg, every other day), and the combined therapy of **Cl-IB-MECA** and 5-FU. After 20 days a clear synergistic effect between **Cl-IB -MECA** and 5-FU in noting the tumor mass was seen.

ST **adenosine receptor** agonist antagonist oral antitumor; **granulocyte colony stimulating factor** purinoceptor antitumor

IT Purinoceptor agonists
(A1; oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT **Adenosine receptors**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**A1**; oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT Purinoceptor agonists
Purinoceptor antagonists
(A2; oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT **Adenosine receptors**

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**A2**; oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT Purinoceptor agonists
(A3; oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT **Adenosine receptors**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**A3**; oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT Antitumor agents
(colon carcinoma; oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT Intestine, neoplasm
(colon, carcinoma, inhibitors; oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT **Bone marrow**
Leukocyte
(differentiation and proliferation, induction of; oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT **Leukocytopenia**
(drug-induced; oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT Body weight
(loss, drug-induced; oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT Antitumor agents
(lymphoma; oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT Antitumor agents
(melanoma; oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT Toxicity
(myelotoxicity, prevention of; oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT Antitumor agents
Cell differentiation
Cell proliferation
(oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT Drug delivery systems
(oral; oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT Drug interactions
(synergistic; oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT **Bone marrow**

(toxicity, prevention of; oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT 51-21-8, Fluorouracil 23214-92-8, Doxorubicin
RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT **120442-40-2**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

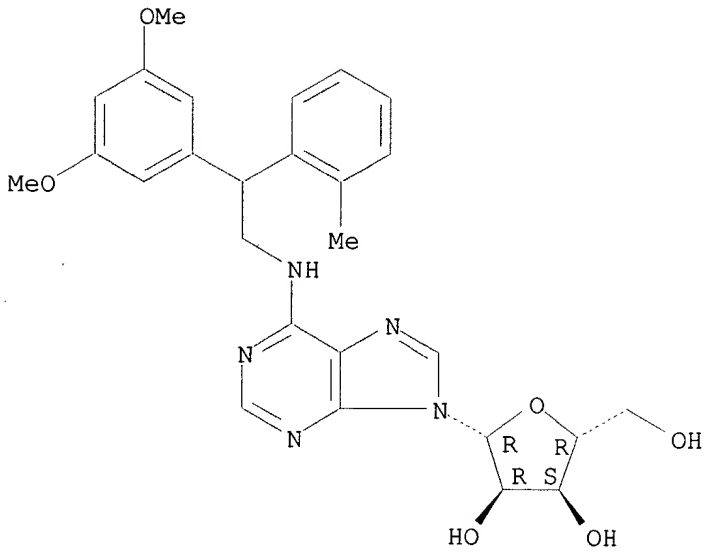
IT 58-61-7, **Adenosine**, biological studies 14114-46-6
37739-05-2, CCPA **41552-82-3**, N-Cyclopentyladenosine
102146-07-6, DPCPX **152918-14-4 152918-18-8, IB-MECA 152918-27-9, AB-MECA 163042-96-4, Cl-IB-MECA**
183721-15-5, MRS 1200 212329-37-8, MRS 1523
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT **143011-72-7, Granulocyte colony-stimulating factor**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

IT **120442-40-2**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

RN 120442-40-2 HCAPLUS
CN Adenosine, N-[2-(3,5-dimethoxyphenyl)-2-(2-methylphenyl)ethyl]- (9CI) (CA INDEX NAME)

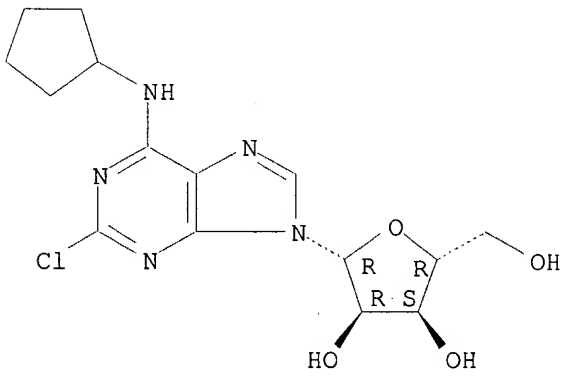
Absolute stereochemistry.



IT **37739-05-2**, CCPA **41552-82-3**, N-Cyclopentyladenosine
152918-14-4 152918-18-8, IB-MECA
152918-27-9, AB-MECA 163042-96-4,
Cl-IB-MECA
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)

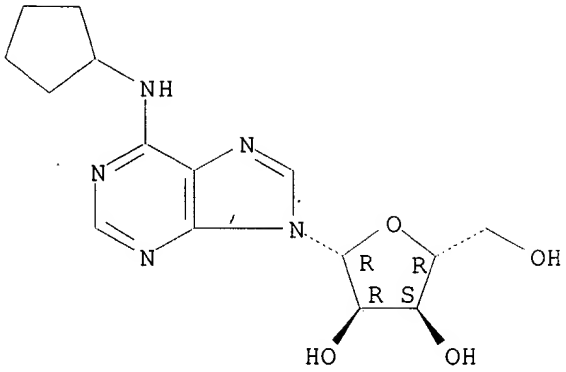
RN 37739-05-2 HCAPLUS
CN Adenosine, 2-chloro-N-cyclopentyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



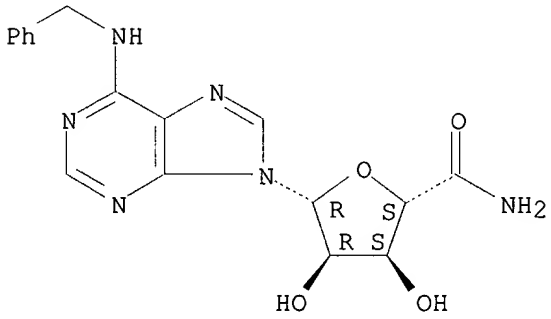
RN 41552-82-3 HCAPLUS
CN Adenosine, N-cyclopentyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



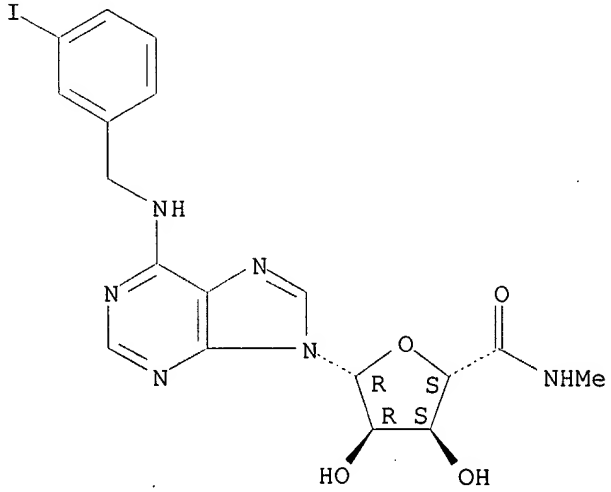
RN 152918-14-4 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-1-[6-[(phenylmethyl)amino]-9H-purin-9-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 152918-18-8 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-1-[6-[[(3-iodophenyl)methyl]amino]-9H-purin-9-yl]-N-methyl- (9CI) (CA INDEX NAME)

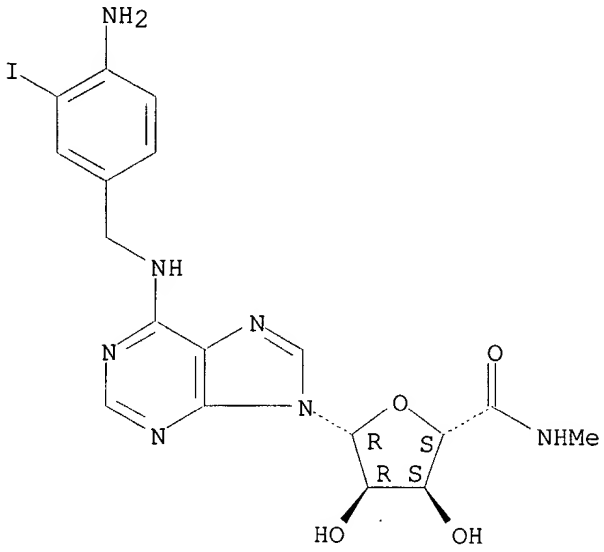
Absolute stereochemistry.



RN 152918-27-9 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-[[(4-amino-3-iodophenyl)methyl]amino]-9H-

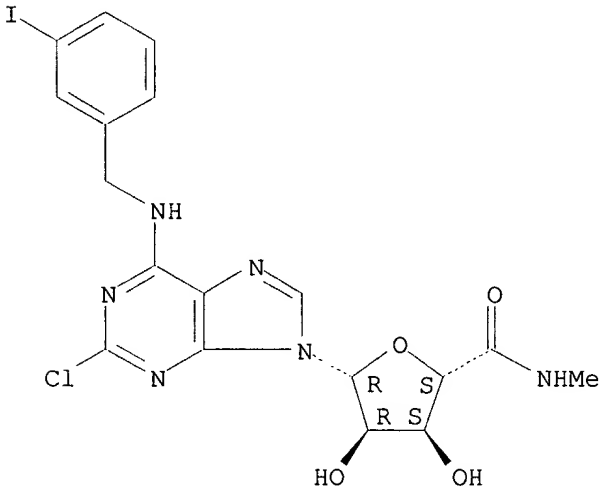
purin-9-yl]-1-deoxy-N-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 163042-96-4 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[2-chloro-6-[[(3-iodophenyl)methyl]amino]-9H-purin-9-yl]-1-deoxy-N-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **143011-72-7, Granulocyte colony-stimulating factor**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(oral compns. comprising **adenosine receptor** agonist or antagonist for prevention or treatment of toxic side effects and cancer treatment)
RN 143011-72-7 HCAPLUS
CN Colony-stimulating factor, granulocyte (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L174 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:115003 HCAPLUS
DN 134:177357
TI Treatment of patients having non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies
IN Rastetter, William H.
PA Idec Pharmaceuticals Corporation, USA
SO PCT Int. Appl., 17 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K039-395
CC 15-3 (Immunochemistry)
Section cross-reference(s): 1, 8, 63
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001010462	A1	20010215	WO 2000-US40459	20000725 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1207906	A1	20020529	EP 2000-965561	20000725 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
NO 2002000639	A	20020411	NO 2002-639	20020208 <--
PRAI US 1999-148287P	P	19990811 <--		
WO 2000-US40459	W	20000725		

AB This invention relates to methods of reducing **bone marrow** involvement in B cell lymphoma patients prior to radioimmunotherapy by administering monoclonal antibodies which target cancerous B cells.
ST non Hodgkins lymphoma monoclonal antibody CD20; radioimmunotherapy CD20 antibody B cell lymphoma; chemotherapeutic agent monoclonal antibody CD20 lymphoma
IT Lymphoma
(B-cell diffuse, large cell; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Lymphoma
(B-cell nodular; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Lymphoma
(B-cell; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Glycoproteins, specific or class
Proteins, specific or class
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(SU (surface), B cell; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT **Leukemia**
Lymphoma
(T-cell; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Transplant and Transplantation
(**bone marrow**; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)

IT Toxins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(conjugates with anti-CD20 antibody; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Lymphoma
(diffuse; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Lymphocyte
(effector cell, stimulation; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Immunoglobulins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fragments; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Fusion proteins (chimeric proteins)
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(humanized antibody; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Diagnosis
(immunodiagnosis; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Drug delivery systems
(immunotoxins; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT **Bone marrow**
(involvement; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Lymphoma
(large cell; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Lymphoma
(lymphoblastic; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT AIDS (disease)
(lymphoma; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Sarcoma
(lymphosarcoma; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Antibodies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(monoclonal; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Lymphoma
(nodular; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Lymphoma
(non-Hodgkin's, mantle cell; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Lymphoma
(non-Hodgkin's; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Blood
(peripheral stem cell; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Immunotherapy
(radio-; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Cell
(stem, peripheral blood; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
IT Antigens

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(surface; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)

IT Platelet (blood)
(thrombocytopenia, prevention; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)

IT **Bone marrow**
(transplant; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)

IT Chemotherapy
Cytotoxic agents
Immunoradiotherapy
Lymphoma
Tumor markers
(treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)

IT CD19 (antigen)
Cytokines
Interleukin 4
Tumor necrosis factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)

IT Antibodies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)

IT CD20 (antigen)
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)

IT Radionuclides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)

IT Interferons
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(.alpha.; treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)

IT 50-02-2, Dexamethasone 50-07-7, Mitomycin C 50-18-0, Cyclophosphamide 51-75-2, Mechlorethamine 53-03-2, Prednisone 57-22-7, Vincristine 147-94-4, Cytarabine 148-82-3, Melphalan 302-79-4, all-trans-Retinoic acid 671-16-9, Procarbazine 2068-78-2, Oncovin 3778-73-2, Ifosfamide 4291-63-8, Adenosine, 2-chloro-2'-deoxy- 4342-03-4, Dacarbazine 10043-66-0, Iodine-131, biological studies 10098-91-6, Yttrium-90, biological studies 11056-06-7, Bleomycin 15663-27-1, Cisplatin 15750-15-9, Indium-111, biological studies **21679-14-1**, Fludarabine 23214-92-8, Doxorubicin 25316-40-9, Adriamycin 33419-42-0, Etoposide 41575-94-4, Carboplatin 56420-45-2, Epirubicin 58957-92-9, Idarubicin 65271-80-9, Mitozantrone 83869-56-1, GM-CSF **143011-72-7, G-CSF** 174722-31-7, Rituximab
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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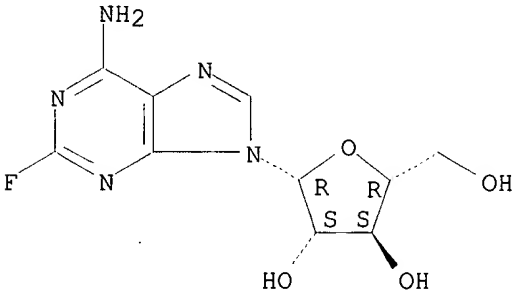
IT **21679-14-1**, Fludarabine **143011-72-7, G-CSF**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(treatment of non-Hodgkins lymphoma with **bone marrow** involvement with anti-CD20 antibodies)
RN 21679-14-1 HCAPLUS
CN 9H-Purin-6-amine, 9-.beta.-D-arabinofuranosyl-2-fluoro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 143011-72-7 HCAPLUS
CN Colony-stimulating factor, granulocyte (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L174 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2002 ACS
AN **2000:475547** HCAPLUS
DN **133:84250**
TI Use of adenosine agonists in cancer therapy for inducing **proliferation** of **hematopoietic** system cells
IN **Fishman, Pnina**; Cohn, Ilan
PA **Can-Fite Technologies Ltd., Israel**
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-70
ICS C07H019-16
CC **1-6** (Pharmacology)
Section cross-reference(s): 63
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2000040251	A1	20000713	WO 2000-IL14	20000107	<--
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
	EP 1140116	A1	20011010	EP 2000-900112	20000107	<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
	JP 2002534390	T2	20021015	JP 2000-592007	20000107	<--
	US 2001031742	A1	20011018	US 2001-782259	20010214	<--
	US 2002037871	A1	20020328	US 2001-871963	20010604	<--

hematopoietic system cells)

IT **36396-99-3 37739-05-2**, 2-Chloro-N6-cyclopentyladenosine
41552-82-3, N6-Cyclopentyladenosine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(adenosine agonists in cancer therapy for inducing proliferation of hematopoietic system cells)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD

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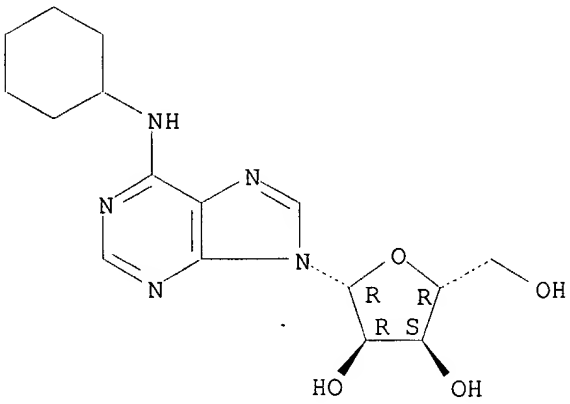
IT **36396-99-3 37739-05-2**, 2-Chloro-N6-cyclopentyladenosine
41552-82-3, N6-Cyclopentyladenosine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(adenosine agonists in cancer therapy for inducing proliferation of hematopoietic system cells)

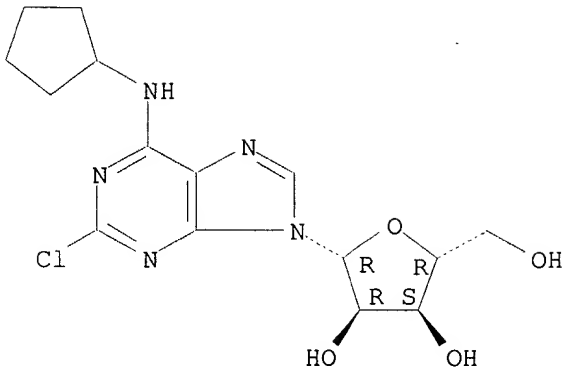
RN 36396-99-3 HCAPLUS
CN Adenosine, N-cyclohexyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



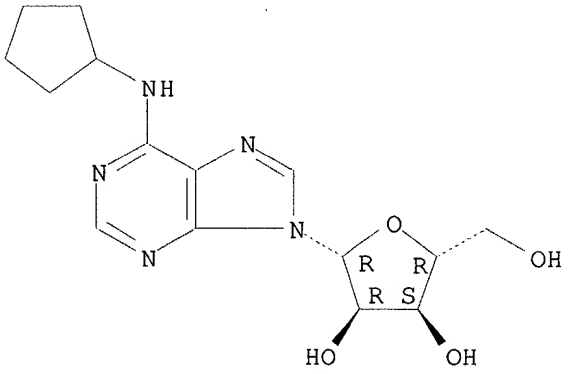
RN 37739-05-2 HCAPLUS
CN Adenosine, 2-chloro-N-cyclopentyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 41552-82-3 HCAPLUS
CN Adenosine, N-cyclopentyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L174 ANSWER 8 OF 19 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:291051 HCAPLUS
DN 133:26585
TI **Adenosine** acts as a chemoprotective agent by stimulating **G-CSF** production: a role for A1 and A3 **adenosine receptors**
AU **Fishman, Pnina**; Bar-Yehuda, Sara; Farbstein, Tamar; Barer, Faina; Ohana, Gil
CS Laboratory of Clinical and Tumor Immunology, The Felsenstein Medical Research Center, Rabin Medical Center, Tel-Aviv University, Petach-Tikva, Israel
SO Journal of Cellular Physiology (2000), 183(3), 393-398
CODEN: JCLLAX; ISSN: 0021-9541
PB Wiley-Liss, Inc.
DT Journal
LA English
CC 1-6 (Pharmacology)
Section cross-reference(s): 2
AB **Adenosine**, a ubiquitous nucleoside, is released into the extracellular environment from metabolically active or stressed cells. It binds to cells through specific A1, A2A, A2B, and A3 G-protein-assocd. cell-surface **receptors**, thus acting as a signal-transduction mol. by regulating the levels of adenylyl cyclase and phospholipase C. In this study, we showed that **adenosine** stimulates the proliferation of murine **bone marrow** cells in vitro. Pharmacol. studies, using antagonists to the **adenosine**

receptors, revealed that this activity was mediated through the binding of **adenosine** to its A1 and A3 **receptors**. This result was further corroborated by showing that the two selective A1 and A3 **receptor** agonists, N-cyclopentyladenosine (CPA) and 1-deoxy-1-[6-[[(3-iodophenyl)methyl]amino]-9H-purin-9-yl]-N-methyl-.beta.-D-ribofuranuronamide (**IB-MECA**) resp., induced **bone marrow** cell proliferation in a manner similar to **adenosine**. **Adenosine**'s interaction with its A1 and A3 **receptors** induced **G-CSF** prodn., which led to its stimulatory effect on **bone marrow** cells. These results were confirmed in vivo when we demonstrated that low-dose **adenosine** (0.25 mg/kg) acted as a chemoprotective agent. When administered after chemotherapy, it restored the no. of leukocytes and neutrophils to normal levels, compared with the decline in these parameters after chemotherapy alone. It is suggested that low-dose **adenosine**, already in clin. use, may also be applied as a chemoprotective agent.

ST **adenosine** chemoprotectant CSF **receptor**

IT **Adenosine receptors**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**A1**; **adenosine** acts as **bone marrow** chemoprotective agent by stimulating **granulocyte -CSF** prodn. and role for **adenosine A1** and **A3 receptors** therein)

IT **Adenosine receptors**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**A3**; **adenosine** acts as **bone marrow** chemoprotective agent by stimulating **granulocyte -CSF** prodn. and role for **adenosine A1** and **A3 receptors** therein)

IT **Bone marrow**
Cytoprotective agents
Hematopoiesis
Leukocyte
Neutrophil
Signal transduction, biological
(**adenosine** acts as **bone marrow** chemoprotective agent by stimulating **granulocyte-CSF** prodn. and role for **adenosine** A1 and A3 **receptors** therein)

IT 50-18-0, Cyclophosphamide
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(**adenosine** acts as **bone marrow** chemoprotective agent by stimulating **granulocyte-CSF** prodn. and role for **adenosine** A1 and A3 **receptors** therein)

IT **41552-82-3**, N-Cyclopentyladenosine **152918-18-8**, **IB-MECA**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(**adenosine** acts as **bone marrow** chemoprotective agent by stimulating **granulocyte-CSF** prodn. and role for **adenosine** A1 and A3 **receptors** therein)

IT 58-61-7, **Adenosine**, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**adenosine** acts as **bone marrow** chemoprotective agent by stimulating **granulocyte-CSF** prodn. and role for **adenosine** A1 and A3 **receptors**

therein)
IT **143011-72-7, Granulocyte-colony-stimulating factor**
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(**adenosine** acts as **bone marrow** chemoprotective agent by stimulating **granulocyte-CSF** prodn. and role for **adenosine** A1 and A3 **receptors** therein)
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
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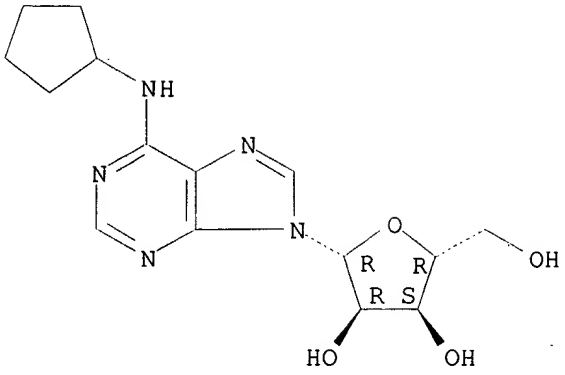
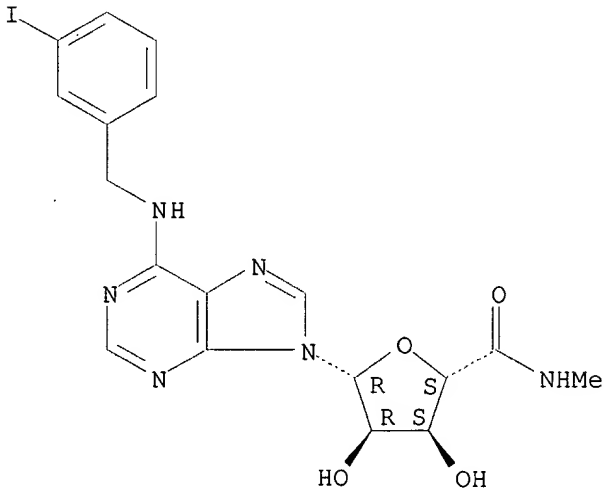
IT **41552-82-3**, N-Cyclopentyladenosine **152918-18-8, IB-MECA**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(**adenosine** acts as **bone marrow** chemoprotective agent by stimulating **granulocyte-CSF** prodn. and role for **adenosine** A1 and A3 **receptors** therein)
RN 41552-82-3 HCAPLUS
CN Adenosine, N-cyclopentyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 152918-18-8 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-1-[6-[[(3-iodophenyl)methyl]amino]-9H-purin-9-yl]-N-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **143011-72-7, Granulocyte-colony-stimulating factor**
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(**adenosine** acts as **bone marrow** chemoprotective agent by stimulating **granulocyte-CSF** prodn. and role for **adenosine** A1 and A3 **receptors** therein)
RN 143011-72-7 HCAPLUS
CN Colony-stimulating factor, granulocyte (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L174 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:261134 HCAPLUS
DN 133:53042
TI Clinically available drugs as potential curative means for treatment of radiation-induced **myelosuppression**
AU Hofer, M.; Pospisil, M.
CS Institute of Biophysics, Academy of Sciences of the Czech Republic, Brno,

612 65, Czech Rep.
SO NATO Science Series, 2: Environmental Security (**1999**), 55(Fundamentals for the Assessment of Risks from Environmental Radiation), 421-426
CODEN: NSESFA; ISSN: 1389-1839
PB Kluwer Academic Publishers
DT Journal; General Review
LA English
CC 1-0 (Pharmacology)
Section cross-reference(s): 8
AB A review with 36 refs. The **bone marrow** syndrome represents the most probable manifestation of the acute radiation disease following medical application of ionizing radiation, as well as contingent nuclear accidents. Protection and treatment of marrow damage induced by radiation exposures in the range of sublethal and near LDs is, at present, a serious medical problem. Moreover, radiation-induced hematopoietic suppression may serve as a model for studying the effects of other **bone marrow** damaging factors and medical procedures, including cytostatic chemotherapy. Among the compds. tested as potential stimulators of mammalian **hematopoiesis** damaged by ionizing radiation in the Institute of Biophysics, Brno, Czech Republic, also clin. available medicaments belonging to non-steroidal anti-inflammatory drugs (NSAIDs) or drugs used in cardiovascular medicine were used. NSAIDs act on the principle of inhibition of prostaglandin prodn. Prostaglandins operate in neg. feedback control of **hematopoiesis**, esp. granulopoiesis. Removal of this feedback enables to enhance prodn. of functional blood cells. Indomethacin, diclofenac, flurbiprofen, and nitroxybutylester of flurbiprofen have been successfully tested as hematopoietic stimulators in irradiated mice. Administration of flurbiprofen nitroxybutylester, a newly synthesized flurbiprofen deriv., appears to be esp. promising from the point of view of decreased gastrointestinal toxicity of this compd. Dipyridamole (DP) and **adenosine** monophosphate (AMP) used clin. for decreasing platelet aggregation (DP) and as vasodilators and cardioprotectants (DP, AMP) operate as enhancers of extracellular concn. of **adenosine**. **Receptor**-based extracellular action of **adenosine** has been found to stimulate **hematopoiesis** on the levels of stem and progenitor cell populations. Interesting results on synergistic action of DP + AMP and **granulocyte colony-stimulating factor** (**G-CSF**) on mouse granulopoiesis have been obtained as well. Haematopoiesis-enhancing effects of drugs elevating extracellular **adenosine** may be of clin. importance both from the point of view of medical benefit as well as from the standpoint of contingent financial savings obtained when using these unexpensive drugs.
ST review radiation myelosuppression therapy **hematopoiesis**
IT Cytoprotective agents
(cardioprotective; clin. available drugs as potential curative means for treatment of radiation-induced myelosuppression)
IT **Hematopoiesis**
Ionizing radiation
Nuclear reactor accident
Radioprotectants
Vasodilators
(clin. available drugs as potential curative means for treatment of radiation-induced myelosuppression)
IT **Hematopoiesis**
(disorders, myelosuppression; clin. available drugs as potential curative means for treatment of radiation-induced myelosuppression)
IT Anti-inflammatory agents
(nonsteroidal; clin. available drugs as potential curative means for treatment of radiation-induced myelosuppression)
RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L174 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2002 ACS
AN **1999:807344** HCAPLUS
DN **132:30462**
TI Fludarabine, cytarabine, and **granulocyte-colony stimulating factor** for the treatment of high risk **myelodysplastic** syndromes
AU Ferrara, Felicetto; Leoni, Franco; Pinto, Antonio; Mirto, Salvatore; Morra, Enrica; Zagonel, Vittorina; Mele, Giuseppina; Ciolli, Stefania; Magrin, Silvana; Montillo, Marco
CS Divisione di Ematologia, Ospedale Cardarelli, Naples, 80128, Italy
SO Cancer (New York) (**1999**), 86(10), 2006-2013
CODEN: CANCAR; ISSN: 0008-543X
PB John Wiley & Sons, Inc.
DT Journal
LA English
CC 1-6 (Pharmacology)
AB BACKGROUND. The prognosis of patients with high risk myelodysplastic syndromes (MDS) (i.e., refractory anemia with excess of blasts [RAEB] and refractory anemia with excess of blasts in transformation [RAEB-t]) usually is poor. The combination of fludarabine, cytarabine, and **granulocyte-colony stimulating factor** (**G-CSF**) (FLAG regimen) has been reported to be effective in patients with these diseases. METHODS. Forty-two patients (32 with RAEB-t and 10 with RAEB) were treated with the FLAG regimen. The median age was 61 yr (range, 27-74 yr). Forty patients were diagnosed

with primary MDS and 2 patients had treatment-related MDS. Induction therapy was comprised of the FLAG regimen, whereas consolidation therapy included idarubicin and cytarabine. Patients with a compatible donor and who were age < 50 yr were scheduled to undergo an allogeneic **bone marrow** transplantation (BMT), whereas for those patients without a donor and who were age < 60 yr autologous BMT with peripheral blood stem cells mobilized by the consolidation regimen plus **G-CSF** was planned. RESULTS. Complete remission (CR) was achieved in 31 of 42 patients (74%; 95% confidence interval, 60-87%). Death during induction therapy occurred in 4 patients (9%) whereas 7 patients (17%) were resistant to the FLAG regimen. Toxicity from the consolidation regimen was negligible. All patients age < 50 yr and achieving CR were eligible for allogeneic BMT procedures, with early recurrence being the only reason for exclusion. The median overall survival and disease free survival were 13 mo and 18 mo, resp. Patients with favorable cytogenetics had a significantly better outcome compared with those patients with an adverse karyotype. CONCLUSIONS. The FLAG regimen is effective in patients with high risk MDS as well as in patients age > 60 yr. The toxicity of the regimen is low and the majority of patients are eligible to undergo allogeneic BMT procedures after induction/consolidation therapy.

ST fludarabine cytarabine GCSF myelodysplastic syndrome antitumor

IT Transplant and Transplantation
Transplant and Transplantation
(**bone marrow**; fludarabine, cytarabine, and **G-CSF** for treatment of high risk myelodysplastic syndromes in humans)

IT Antitumor agents
Myelodysplastic syndromes
(fludarabine, cytarabine, and **G-CSF** for treatment of high risk myelodysplastic syndromes in humans)

IT **Bone marrow**
Bone marrow
(transplant; fludarabine, cytarabine, and **G-CSF** for treatment of high risk myelodysplastic syndromes in humans)

IT 147-94-4, Cytarabine **21679-14-1**, Fludarabine **143011-72-7**, **Granulocyte-colony stimulating factor**
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fludarabine, cytarabine, and **G-CSF** for treatment of high risk myelodysplastic syndromes in humans)

RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD

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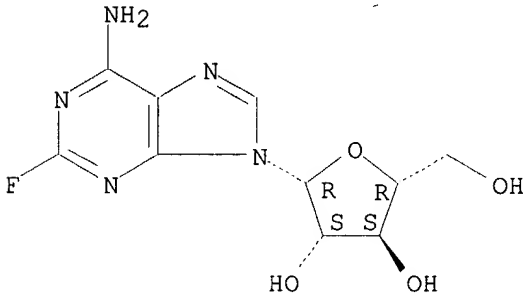
IT **21679-14-1**, Fludarabine **143011-72-7**, **Granulocyte -colony stimulating factor**
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fludarabine, cytarabine, and **G-CSF** for treatment of high risk myelodysplastic syndromes in humans)

RN 21679-14-1 HCAPLUS
CN 9H-Purin-6-amine, 9-.beta.-D-arabinofuranosyl-2-fluoro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 143011-72-7 HCAPLUS
CN Colony-stimulating factor, granulocyte (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L174 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2002 ACS
AN **1999:631898** HCAPLUS
DN **131:237646**
TI Topotecan and cytarabine is an active combination regimen in **myelodysplastic** syndromes and chronic **myelomonocytic leukemia**
AU Beran, Miloslav; Estey, Elihu; O'Brien, Susan; Cortes, Jorge; Koller, Charles A.; Giles, Francis J.; Kornblau, Steven; Andreeff, Michael; Vey, Norbert; Pierce, Sherry R.; Hayes, Kimberly; Wong, Gee Chuan; Keating, Michael; Kantarjian, Hagop
CS Departments of Leukemia and Molecular Hematology, and Division of

Laboratory Medicine, The University of Texas M.D. Anderson Cancer Center, Houston, TX, 77030, USA
SO Journal of Clinical Oncology (**1999**), 17(9), 2819-2830
CODEN: JCONDN; ISSN: 0732-183X
PB Lippincott Williams & Wilkins
DT Journal
LA English
CC 1-6 (Pharmacology)
AB The aim of this study was to evaluate the efficacy and safety of the combination of topotecan and cytarabine in patients with myelodysplastic syndromes (MDSs) and chronic myelomonocytic leukemia (CMML). Fifty-nine patients with MDSs and 27 with CMML were enrolled. They were either previously untreated (66%) or had received only biol. agents (14%) or chemotherapy with or without biol. agents (20%). Treatment consisted of topotecan 1.25 mg/m2 by continuous i.v. infusion daily for 5 days and cytarabine 1.0 g/m2 by infusion over 2 h daily for 5 days. Prophylaxis included antibacterial, antifungal, and antiviral agents. At a median follow-up of 7 mo, all 86 patients were assessable for response and toxicity. Complete remission (CR) was obsd. in 48 patients (56%; 61% with MDSs, 44% with CMML; P = .15). Similar CR rates were obsd. for patients with good-risk and poor-risk MDS (70% and 56%, resp.). The treatment effectively induced CR in patients with a poor-prognosis karyotype involving chromosomes 5 and 7 (CR, 71%) and secondary MDSs (CR, 72%). Fifty-four patients received one induction course, 25 patients received two, and the rest received more than two. The median no. of continuation courses was two. The median overall duration of CR was 34 wk (50 wk for MDSs and 33 wk for CMML). The median survival was 60 wk for MDS and 44 wk for CMML patients. CR and survival durations were longer in patients with refractory anemia with excess blasts (RAEB). Grade 3 or 4 mucositis or diarrhea was obsd. in three patients each. Fever was obsd. in 63%, and infections in 49% of patients. Six patients (7%) died during induction therapy. Topotecan and cytarabine induced high CR rates in unselected patients with MDSs and CMML, particularly among patients with poor-prognosis cytogenetics and secondary MDSs. Topotecan-cytarabine is an active induction regimen in MDS and CMML patients, is well tolerated, and is assocd. with a low mortality rate.
ST topotecan cytarabine myelodysplastic syndrome myelomonocytic leukemia
IT Toxicity
(drug; effect of topotecan and cytarabine in myelodysplastic syndromes and chronic myelomonocytic leukemia)
IT **Myelodysplastic syndromes**
(effect of topotecan and cytarabine in myelodysplastic syndromes and chronic myelomonocytic leukemia)
IT Antitumor agents
(myelomonocytic leukemia; effect of topotecan and cytarabine in myelodysplastic syndromes and chronic myelomonocytic leukemia)
IT 147-94-4, Cytarabine 302-79-4, Trans-Retinoic acid **21679-14-1**, Fludarabine 58957-92-9, Idarubicin 123948-87-8, Topotecan **143011-72-7**, GCSF
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(effect of topotecan and cytarabine in myelodysplastic syndromes and chronic myelomonocytic leukemia)
RE.CNT 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD
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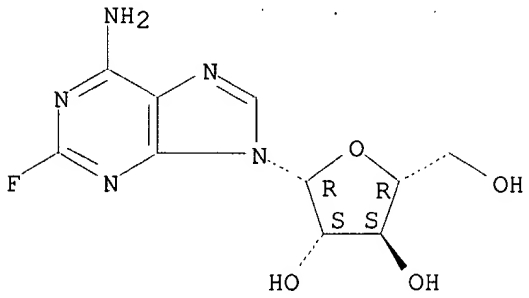
IT **21679-14-1**, Fludarabine **143011-72-7**, GCSF
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(effect of topotecan and cytarabine in myelodysplastic syndromes and chronic myelomonocytic leukemia)

RN 21679-14-1 HCAPLUS

CN 9H-Purin-6-amine, 9-.beta.-D-arabinofuranosyl-2-fluoro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 143011-72-7 HCAPLUS
CN Colony-stimulating factor, granulocyte (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L174 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:427884 HCAPLUS
DN 131:97038
TI Fludarabine-containing regimens severely impair peripheral blood stem cells mobilization and collection in acute **myeloid leukemia** patients
AU Visani, G.; Lemoli, R. M.; Tosi, P.; Martinelli, G.; Testoni, N.; Ricci, P.; Piccaluga, P. P.; Pastano, R.; Leopardi, G.; Dizdari, A.; Motta, M. R.; Rizzi, S.; Tura, S.
CS Institute of Haematology and Medical Oncology 'L. e A. Seragnoli', University of Bologna, Bologna, 40138, Italy
SO British Journal of Haematology (**1999**), 105(3), 775-779
CODEN: BJHEAL; ISSN: 0007-1048
PB Blackwell Science Ltd.
DT Journal
LA English
CC 1-6 (Pharmacology)
AB We studied the effects of an intensified induction/consolidation treatment contg. fludarabine (ICE/FLAN/FLAN) on the mobilization and collection of peripheral blood stem cells (PBSC) in 31 consecutive untreated acute myeloid leukemia (AML) patients. The complete remission (CR) rate was comparable to classic inductions (68% after ICE: 84% after ICE-FLAN I). To mobilize PBSC, 19 patients received 10 .mu.g/kg/d of **granulocyte-colony stimulating factor** (**G-CSF**) starting at day 13 after FLAN, 13 (69%) of whom were found to be nonmobilizers. When a second **G-CSF** administration was performed in 10/13 patients mobilization was either not achieved (8/10) or was considered insufficient (<1.times.106 CD34+ cells/kg) (2/10) and all 13 were subsequently submitted to **bone marrow** harvest. The harvest was considered adequate in 12/13 (92%) patients and autologous BMT (ABMT) has so far been performed in 10/12 cases with a mean of 8.6.times.108/kg nucleated reinfused cells. The median times to neutrophil and platelet recovery after ABMT did not significantly differ from those of two previous series of patients treated with ABMT without fludarabine-contg. regimens. Adequate amts. of PBSC were obtained in 6/19 (31%) patients, who were then reinfused. Median times for platelet recovery were significantly longer than in a previous series of 26 AML cases reinfused with PBSC after treatment with the ICE-NOVIA induction/consolidation regimen (125 v 20d to 20.times.109 plt/l, P < 0.02: 218 v 37d to

50.times.109 plt/l, P < 0.02). In addn., times for platelet recovery after ICE/FLAN/FLAN were not significantly different from those in a previous group treated with ABMT performed after ICE/NOVIA, without fludarabine. We conclude that fludarabine-contg. regimens severely impair mobilization and collection of PBSC in AML patients and seem unsuitable when PBSC autotransplantation is programmed.

ST fludarabine stem cell mobilization myeloid leukemia

IT Antitumor agents
(acute myelogenous leukemia; fludarabine-contg. regimens severely impair peripheral blood stem cell mobilization and collection in humans with acute myeloid leukemia)

IT Transplant and Transplantation
(autotransplant, peripheral blood stem cell; fludarabine-contg. regimens severely impair peripheral blood stem cell mobilization and collection in humans with acute myeloid leukemia)

IT **Hematopoietic precursor cell**
(stem; fludarabine-contg. regimens severely impair peripheral blood stem cell mobilization and collection in humans with acute myeloid leukemia)

IT **21679-14-1**, Fludarabine
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fludarabine-contg. regimens severely impair peripheral blood stem cell mobilization and collection in humans with acute myeloid leukemia)

IT **143011-72-7, Granulocyte-colony stimulating factor**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fludarabine-contg. regimens severely impair peripheral blood stem cell mobilization and collection in humans with acute myeloid leukemia)

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD

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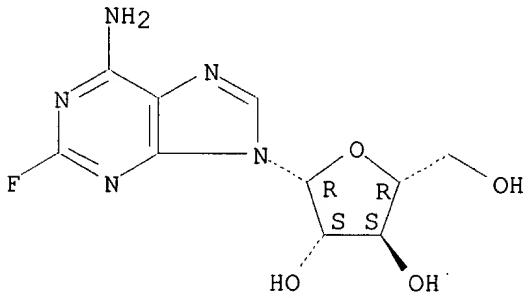
IT **21679-14-1**, Fludarabine
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(fludarabine-contg. regimens severely impair peripheral blood stem cell mobilization and collection in humans with acute myeloid leukemia)
RN 21679-14-1 HCAPLUS
CN 9H-Purin-6-amine, 9-.beta.-D-arabinofuranosyl-2-fluoro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **143011-72-7, Granulocyte-colony stimulating factor**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fludarabine-contg. regimens severely impair peripheral blood stem cell mobilization and collection in humans with acute myeloid leukemia)
RN 143011-72-7 HCAPLUS
CN Colony-stimulating factor, granulocyte (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L174 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2002 ACS
AN **1999:245744** HCAPLUS
DN **130:346997**
TI **Randomized** phase II study of fludarabine + cytosine arabinoside + idarubicin .+-. all-trans retinoic acid .+-. **granulocyte colony-stimulating factor** in poor prognosis newly diagnosed acute **myeloid leukemia** and **myelodysplastic** syndrome
AU Estey, Elihu H.; Thall, Peter F.; Pierce, Sherry; Cortes, Jorge; Beran, Miloslav; Kantarjian, Hagop; Keating, Michael J.; Andreeff, Michael; Freireich, Emil
CS Department of Leukemia, Division of Medicine, The University of Texas M.D. Anderson Cancer Center, Houston, TX, 77030, USA
SO Blood (**1999**), 93(8), 2478-2484
CODEN: BLOOAW; ISSN: 0006-4971
PB W. B. Saunders Co.
DT Journal
LA English
CC 1-6 (Pharmacology)
Section cross-reference(s): 15, 18
AB Preclin. data suggest that retinoids, eg, all-trans retinoic acid (ATRA), lower concns. of antiapoptotic proteins such as bcl-2, possibly thereby improving the outcome of anti-acute myeloid leukemia (AML) chemotherapy. **Granulocyte colony-stimulating factor** (**G-CSF**) has been considered to be potentially synergistic with ATRA in this regard. Accordingly, we randomized 215 patients with newly diagnosed AML (153 patients) or high-risk myelodysplastic syndrome (MDS) (refractory anemia with excess blasts [RAEB] or RAEB-t, 62 patients) to receive fludarabine + ara-C + idarubicin (FAI) alone, FAI + ATRA, FAI + **G-CSF**, or FAI + ATRA + **G-CSF**. Eligibility required one of the following: age over 71 yr, a history of abnormal blood counts before M.D. Anderson (MDA)

presentation, secondary AML/MDS, failure to respond to one prior course of chemotherapy given outside MDA, or abnormal renal or hepatic function. For the two treatment arms contg. ATRA, ATRA was given 2 days (day-2) before beginning and continued for 3 days after completion of FAI. For the two treatment arms including **G-CSF**, **G-CSF** began on day-1 and continued until neutrophil recovery. Patients with white blood cell (WBC) counts >50,000/.mu.L began ATRA on day 1 and **G-CSF** on day 2. Events (death, failure to achieve complete remission [CR], or relapse from CR) have occurred in 77% of the 215 patients. Reflecting the poor prognosis of the patients entered, the CR rate was only 51%, median event-free survival (EFS) time once in CR was 36 wk, and median survival time was 28 wk. A Cox regression anal. indicated that, after accounting for patient prognostic variables, none of the three adjuvant treatment combinations (FAI + ATRA, FAI + G, FAI + ATRA + G) affected survival, EFS, or EFS once in CR compared with FAI. Similarly, there were no significant effects of either ATRA ignoring **G-CSF**, or of **G-CSF** ignoring ATRA. As previously found, a diagnosis of RAEB or RAEB-t rather than AML was insignificant. There were no indications that the effect of ATRA differed according to cytogenetic group, diagnosis (AML or MDS), or treatment schedule. Logistic regression anal. indicated that, after accounting for prognosis, addn. of **G-CSF** .+-. ATRA to FAI improved CR rate vs. either FAI or FAI + ATRA, but **G-CSF** had no effect on the other outcomes. We conclude that addn. of ATRA .+-. **G-CSF** to FAI had no effect on CR rate, survival, EFS, or EFS in CR in poor prognosis, newly diagnosed AML or high-risk MDS.

ST fludarabine cytosine arabinoside idarubicin retinoate colony stimulating factor leukemia

IT Antitumor agents
(myelogenous leukemia; randomized phase II study of fludarabine + cytosine arabinoside + idarubicin .+-. all-trans retinoic acid .+-. **granulocyte colony-stimulating factor** in poor prognosis newly diagnosed human acute myeloid leukemia and myelodysplastic syndrome)

IT **Myelodysplastic syndromes**
(randomized phase II study of fludarabine + cytosine arabinoside + idarubicin .+-. all-trans retinoic acid .+-. **granulocyte colony-stimulating factor** in poor prognosis newly diagnosed human acute myeloid leukemia and myelodysplastic syndrome)

IT 147-94-4, Cytosine arabinoside 302-79-4, Retinoic acid **21679-14-1**, Fludarabine 58957-92-9, Idarubicin **143011-72-7, Granulocyte colony-stimulating factor**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(randomized phase II study of fludarabine + cytosine arabinoside + idarubicin .+-. all-trans retinoic acid .+-. **granulocyte colony-stimulating factor** in poor prognosis newly diagnosed human acute myeloid leukemia and myelodysplastic syndrome)

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD

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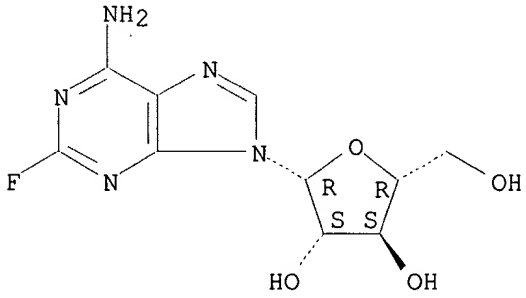
IT **21679-14-1**, Fludarabine **143011-72-7**, **Granulocyte colony-stimulating factor**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(randomized phase II study of fludarabine + cytosine arabinoside + idarubicin .+-. all-trans retinoic acid .+-. **granulocyte colony-stimulating factor** in poor prognosis newly diagnosed human acute myeloid leukemia and myelodysplastic syndrome)

RN 21679-14-1 HCAPLUS
CN 9H-Purin-6-amine, 9-.beta.-D-arabinofuranosyl-2-fluoro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 143011-72-7 HCAPLUS
CN Colony-stimulating factor, granulocyte (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L174 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2002 ACS
AN **1999:64673** HCAPLUS
DN **130:90536**
TI Adenosine and active agents interacting with the adenosine system as **adjunctive** therapeutic agents
IN Cohn, Ilan; **Fishman, Pnina**

PA **Can-Fite Technologies Ltd., Israel**
SO PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-00
CC **1-12** (Pharmacology)
Section cross-reference(s): 63
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI WO 9902143	A2	19990121	WO 1998-IL324	19980710	<--
WO 9902143	A3	19990812			
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
IL 121272	A1	20000601	IL 1997-121272	19970710	<--
AU 9882392	A1	19990208	AU 1998-82392	19980710	<--
EP 994702	A2	20000426	EP 1998-932488	19980710	<--
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
JP 2001509479	T2	20010724	JP 2000-501739	19980710	<--
PRAI IL 1997-121272	A	19970710	<--		
WO 1998-IL324	W	19980710	<--		

AB Adenosine and active agent which interact with the adenosine system are used to treat conditions of weakened, immune system, as an anti-cancer therapy and for improving the therapeutic index of a variety of therapeutic drugs.

ST adenosine adjunctive therapeutic agent immune system cancer therapy

IT **Adenosine receptors**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**A1; adenosine** and active agents interacting with the **adenosine** system as adjunctive therapeutic agents)

IT **Adenosine receptors**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**A2; adenosine** and active agents interacting with the **adenosine** system as adjunctive therapeutic agents)

IT Mammary gland
Mammary gland
Mammary gland
(adenocarcinoma, inhibitors; adenosine and active agents interacting with the adenosine system as adjunctive therapeutic agents)

IT Antipsychotics
Antitumor agents
Chemotherapy
Drug delivery systems
Drug interactions
Drugs
Immunostimulants
Leukocyte
Leukocytopenia
Lymphocyte
Monocyte
Mononuclear cell (leukocyte)
Polymorphonuclear leukocyte
Tranquilizers

(adenosine and active agents interacting with the adenosine system as adjunctive therapeutic agents)

IT Interleukin 12
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(adenosine and active agents interacting with the adenosine system as adjunctive therapeutic agents)

IT Nucleosides, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(and nucleoside derivs.; adenosine and active agents interacting with the adenosine system as adjunctive therapeutic agents)

IT Cell proliferation
(**bone marrow** cell; adenosine and active agents interacting with the adenosine system as adjunctive therapeutic agents)

IT Prostate gland
(carcinoma, inhibitors; adenosine and active agents interacting with the adenosine system as adjunctive therapeutic agents)

IT **Bone marrow**
(cell, proliferation; adenosine and active agents interacting with the adenosine system as adjunctive therapeutic agents)

IT Toxicity
(drug; adenosine and active agents interacting with the adenosine system as adjunctive therapeutic agents)

IT Antitumor agents
Antitumor agents
(erythroleukemia; adenosine and active agents interacting with the adenosine system as adjunctive therapeutic agents)

IT Antitumor agents
(lymphoma; adenosine and active agents interacting with the adenosine system as adjunctive therapeutic agents)

IT Antitumor agents
Antitumor agents
Antitumor agents
(mammary gland adenocarcinoma; adenosine and active agents interacting with the adenosine system as adjunctive therapeutic agents)

IT Antitumor agents
(melanoma; adenosine and active agents interacting with the adenosine system as adjunctive therapeutic agents)

IT Antitumor agents
(myelogenous leukemia; adenosine and active agents interacting with the adenosine system as adjunctive therapeutic agents)

IT Lymphocyte
(natural killer cell; adenosine and active agents interacting with the adenosine system as adjunctive therapeutic agents)

IT Antitumor agents
(prostate carcinoma; adenosine and active agents interacting with the adenosine system as adjunctive therapeutic agents)

IT 50-18-0, Cyclophosphamide
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(adenosine and active agents interacting with the adenosine system as adjunctive therapeutic agents)

IT 58-61-7, Adenosine, biological studies
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(adenosine and active agents interacting with the adenosine system as adjunctive therapeutic agents)

IT 58-55-9, Theophylline, biological studies 102146-07-6, DPCPX
RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); BIOL (Biological study)
(adenosine and active agents interacting with the adenosine system as adjunctive therapeutic agents)

L174 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:576814 HCAPLUS
DN 129:170044
TI Gene transfer into **hematopoietic** stem cells and clinical application of the technique
AU Ozawa, Keiya
CS Dep. Hematol., Jichi Med. Sch., Tochigi, 329-04, Japan
SO Nippon Naika Gakkai Zasshi (**1998**), 87(8), 1526-1531
CODEN: NNGAAS; ISSN: 0021-5384
PB Nippon Naika Gakkai
DT Journal; General Review
LA Japanese
CC 1-0 (Pharmacology)
Section cross-reference(s): 3
AB A review with 5 refs., on (1) vectors, methods, and efficacy of gene transfer into hematopoietic stem cells (HSC), (2) current status of clin. application of HSC-targeted gene therapy for **adenosine** deaminase deficiency and other diseases, and (3) development of selective amplifier genes. A chimeric gene encoding the fusion protein between the **granulocyte colony-stimulating factor receptor** and the hormone-binding domain of estrogen **receptor** is discussed.
ST review gene therapy hematopoietic stem cell; transfer gene hematopoietic stem cell review
IT Gene therapy
Transformation, genetic
(current status of hematopoietic stem cell-targeted gene therapy)
IT Gene, animal
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(current status of hematopoietic stem cell-targeted gene therapy)
IT **Hematopoietic precursor cell**
(stem; current status of hematopoietic stem cell-targeted gene therapy)

L174 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:476930 HCAPLUS
DN 129:254464
TI Evaluation of **marrow** and blood hemopoietic progenitors in chronic lymphocytic **leukemia** before and after chemotherapy
AU Sala, Roberta; Mauro, Francesca R.; Bellucci, Roberto; De Propris, Maria Stefania; Cordone, Iole; Lisci, Alessandro; Foa, Robin; De Fabritiis, Paolo
CS Department of Cellular Biotechnology and Haematology, University "La Sapienza", Rome, Italy
SO European Journal of Haematology (**1998**), 61(1), 14-20
CODEN: EJHAEC; ISSN: 0902-4441
PB Munksgaard International Publishers Ltd.
DT Journal
LA English
CC 1-6 (Pharmacology)
AB We have evaluated the no. and differentiation pattern of CD34+ cells, as well as the CFU-GM, BFU-E and CFU-GEMM progenitors from the blood (PB) and marrow (BM) of 53 chronic lymphocytic leukemia (CLL) patients. Twenty-four patients were untreated and 29 were studied at 2 mo from the last course of fludarabine or chlorambucil; 6 patients, studied after fludarabine therapy, were further evaluated after mobilization with cyclophosphamide and **G-CSF**. PB of untreated patients showed a median no. of CD34+ cells, CFU-GM, BFU-E and CFU-GEMM/105 seeded

cells and per L of PB similar to those of normal controls. No differences were also found in the no. of clonogenic progenitors/105 cells in patients studied before and after therapy, while significantly fewer BFU-E/l of PB were found after fludarabine. The no. of circulating CD34+ cells/l of PB was significantly lower in patients treated with fludarabine or chlorambucil compared to untreated patients. BM growth was significantly reduced in untreated CLL patients compared to healthy donors. Treatment with fludarabine or chlorambucil restored BM progenitors at levels similar to those of normal controls; this effect did not occur for CFU-GM in patients treated with fludarabine. Three-color fluorescence anal. demonstrated a differentiation pattern of CD34+ cells, with a greater expression of CD13 and CD33 after treatment with fludarabine compared to untreated patients and normal controls. In 4 patients previously treated with fludarabine who underwent a successful cyclophosphamide and **G-CSF** mobilization therapy, 4.times.106 CD34+ cells/kg were collected. These 4 patients showed a notable increase of CD34+ cells and of clonogenic cells in the PB, but a marked decrease of BM progenitor cells. The 2 patients who failed CD34+ cell mobilization had a reduced CFU-GM growth both in the PB and in the BM. Taken together, these studies indicate that residual hemopoietic progenitors are present in untreated CLL patients and that stem cell mobilization and collection can be carried out following fludarabine treatment.

ST chlorambucil fludarabine cyclophosphamide GCSF antileukemic

IT Antitumor agents
(leukemia; evaluation of marrow and blood hemopoietic progenitors in chronic lymphocytic leukemia before and after chemotherapy in humans)

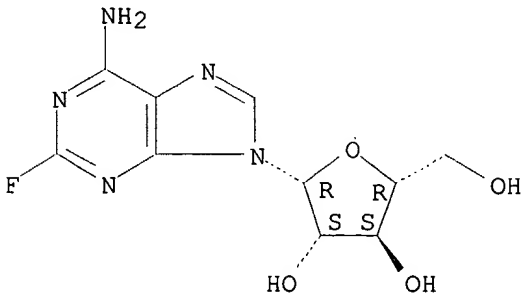
IT 50-18-0, Cyclophosphamide 305-03-3, Chlorambucil **21679-14-1**, Fludarabine **143011-72-7**, **G-CSF**
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(evaluation of marrow and blood hemopoietic progenitors in chronic lymphocytic leukemia before and after chemotherapy in humans)

IT **21679-14-1**, Fludarabine **143011-72-7**, **G-CSF**
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(evaluation of marrow and blood hemopoietic progenitors in chronic lymphocytic leukemia before and after chemotherapy in humans)

RN 21679-14-1 HCAPLUS

CN 9H-Purin-6-amine, 9-.beta.-D-arabinofuranosyl-2-fluoro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 143011-72-7 HCAPLUS

CN Colony-stimulating factor, granulocyte (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L174 ANSWER 17 OF 19 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:240962 HCAPLUS
DN 129:22933
TI **Granulocyte colony-stimulating factor** and drugs elevating extracellular adenosine synergize to enhance **hematopoietic** reconstitution in irradiated mice
AU Pospisil, M.; Hofer, M.; Znojil, V.; Netikova, J.; Vacha, J.; Hola, J.; Vacek, A.
CS Institute Biophysics, Academy Sciences Czech Republic, Brno, Czech Rep.
SO European Journal of Haematology (**1998**), 60(3), 172-180
CODEN: EJHAEC; ISSN: 0902-4441
PB Munksgaard International Publishers Ltd.
DT Journal
LA English
CC 1-4 (Pharmacology)
AB The activation of **adenosine receptors** has recently been demonstrated to stimulate **hematopoiesis**. In the present study, we investigated the ability of drugs elevating extracellular **adenosine** to influence curative effects of **granulocyte colony-stimulating factor** (**G-CSF**) in mice exposed to a sublethal dose of 4 Gy of 60Co radiation. Elevation of extracellular **adenosine** in mice was induced by the combined administration of dipyridamole, a drug inhibiting the cellular uptake of **adenosine**, and **adenosine** monophosphate (AMP), an **adenosine** prodrug. The effects of dipyridamole plus AMP, and **G-CSF**, administered either alone or in combination, were evaluated. The drugs were injected to mice in a 4-d treatment regimen starting on d 3 after irradn. and the hematopoietic response was evaluated on d 7, 10, 14, 18 and 24 after irradn. While the effects of **G-CSF** on the late maturation stages of blood cells, appearing shortly after the completion of the treatment, were not influenced by dipyridamole plus AMP, pos. effects of the combination therapy occurred in the post-irradn. recovery phase which is dependent on the repopulation of hematopoietic stem cells. This was indicated by the significant elevation of counts of granulocyte-macrophage progenitor cells (GM-CFC) and granulocytic cells in the **bone marrow** (d 14), of GM-CFC (d 14), granulocytic and erythroid cells (d 14 and 18) in spleen, and of neutrophils (d 18), monocytes (d 14 and 18) and platelets (d 18) in the peripheral blood. These effects suggest that the repopulation potential of the combination therapy lies in a common multilineage cell population. The results of this study implicate the promising possibility to enhance the curative effects of **G-CSF** under conditions of myelosuppressive states induced by radiation exposure.
ST **granulocyte colony stimulating factor** adenosine **hematopoiesis**; irradn **hematopoiesis** GCSF AMP
IT **Hematopoiesis**
Polymorphonuclear leukocyte
(**granulocyte colony-stimulating factor** and drugs elevating extracellular adenosine synergize to enhance hematopoietic reconstitution in irradiated mice)
IT **Adenosine receptors**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**granulocyte colony-stimulating factor** and drugs elevating extracellular **adenosine** synergize to enhance hematopoietic reconstitution in irradiated mice)
IT **Hematopoietic precursor cell**
(granulocyte-macrophage; **granulocyte colony-stimulating factor** and drugs elevating extracellular adenosine synergize to enhance hematopoietic reconstitution in

irradiated mice)
IT Gamma ray
(irradn.; **granulocyte colony-stimulating factor** and drugs elevating extracellular adenosine synergize to enhance hematopoietic reconstitution in irradiated mice)
IT Drug interactions
(synergistic; **granulocyte colony-stimulating factor** and drugs elevating extracellular adenosine synergize to enhance hematopoietic reconstitution in irradiated mice)
IT 58-32-2, Dipyridamole 61-19-8, Amp, biological studies
143011-72-7, Granulocyte colony-stimulating factor
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(**granulocyte colony-stimulating factor** and drugs elevating extracellular adenosine synergize to enhance hematopoietic reconstitution in irradiated mice)
IT 58-61-7, Adenosine, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**granulocyte colony-stimulating factor** and drugs elevating extracellular adenosine synergize to enhance hematopoietic reconstitution in irradiated mice)
IT **143011-72-7, Granulocyte colony-stimulating factor**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(**granulocyte colony-stimulating factor** and drugs elevating extracellular adenosine synergize to enhance hematopoietic reconstitution in irradiated mice)
RN 143011-72-7 HCAPLUS
CN Colony-stimulating factor, granulocyte (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L174 ANSWER 18 OF 19 HCAPLUS COPYRIGHT 2002 ACS
AN 1997:749200 HCAPLUS
DN 128:70450
TI Fludarabine and **granulocyte colony-stimulating factor** (**G-CSF**) in patients with chronic lymphocytic **leukemia**
AU O'brien, S.; Kantarjian, H.; Beran, M.; Koller, C.; Talpaz, M.; Lerner, S.; Keating, M. J.
CS Department of Hematology, The University of Texas MD Anderson Cancer Center, Houston, TX, 77030, USA
SO Leukemia (**1997**), 11(10), 1631-1635
CODEN: LEUKED; ISSN: 0887-6924
PB Stockton Press
DT Journal
LA English
CC 1-6 (Pharmacology)
Section cross-reference(s): 2
AB The study was designed to det. whether administration of **granulocyte colony-stimulating factor** (**G-CSF**) following fludarabine would reduce the incidences of myelosuppression and infections. Twenty-five previously treated patients with Rai stage III-IV chronic lymphocytic leukemia (CLL) received fludarabine 30 mg/m2 daily for 5 days each month. **G-CSF** was given at 5 .mu.g/kg s.c. starting 1 day after chemotherapy (day 6) and continued until the next course unless the granulocyte count was .gtoreq.10 000/.mu.l. The incidences of myelosuppression and infection were compared with those seen in an historical control

population of 145 previously treated patients with Rai stage III-IV CLL who were given the same schedule of fludarabine without growth factor. There was a significant decrease in myelosuppression; patients receiving **G-CSF** developed neutropenia at a neutrophil count <1000/.mu.l or 500/.mu.l in 45% and 15% of courses vs 79% (P = 0.002) and 63% (P < 0.001) of historical controls. Twenty percent of **G-CSF**-treated patients had therapy delayed by >35 days per course, vs 50% of historical controls (P = 0.005). The incidence of pneumonia was 8% with **G-CSF** and 37% without in historical controls. Other infection rates (sepsis, fever of undetd. origin, minor infections) were similar. This decrease in pneumonia was noted even in high-risk groups such as patients older than 60 yr and patients with hypogammaglobulinemia. The use of **G-CSF** following fludarabine in high-risk patients with CLL resulted in a significant decrease in myelosuppression and pneumonia. Larger trials to verify these results and to compare costs are indicated.

ST GCSF fludarabine myelosuppression chronic lymphocytic leukemia

IT Fever and Hyperthermia
Immunostimulants
Pneumonia
Sepsis
(**G-CSF** to prevent fludarabine-induced myelosuppression in humans with chronic lymphocytic leukemia)

IT **Leukemia**
(chronic lymphocytic; **G-CSF** to prevent fludarabine-induced myelosuppression in humans with chronic lymphocytic leukemia)

IT **Hematopoiesis**
(disorders, myelosuppression; **G-CSF** to prevent fludarabine-induced myelosuppression in humans with chronic lymphocytic leukemia)

IT **21679-14-1**, Fludarabine
RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**G-CSF** to prevent fludarabine-induced myelosuppression in humans with chronic lymphocytic leukemia)

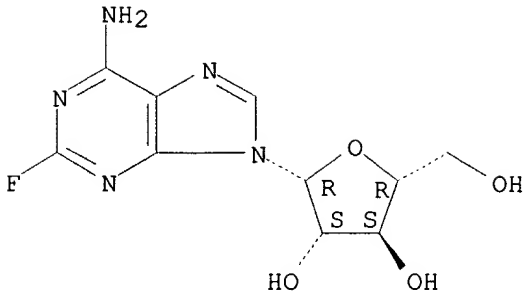
IT **143011-72-7, G-CSF**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**G-CSF** to prevent fludarabine-induced myelosuppression in humans with chronic lymphocytic leukemia)

IT **21679-14-1**, Fludarabine
RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**G-CSF** to prevent fludarabine-induced myelosuppression in humans with chronic lymphocytic leukemia)

RN 21679-14-1 HCAPLUS

CN 9H-Purin-6-amine, 9-.beta.-D-arabinofuranosyl-2-fluoro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **143011-72-7, G-CSF**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**G-CSF** to prevent fludarabine-induced myelosuppression in humans with chronic lymphocytic leukemia)
RN 143011-72-7 HCAPLUS
CN Colony-stimulating factor, granulocyte (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L174 ANSWER 19 OF 19 HCAPLUS COPYRIGHT 2002 ACS
AN **1997:79794** HCAPLUS
DN 126:166179
TI Poor-risk acute **myelogenous leukemia** patients undergoing the fludarabine-cytosine arabinoside - filgrastim regimen: multidrug resistance expression, **granulocyte colony-stimulating factor** priming activity and clinical response
AU Petti, M. C.; Martelli, M. P.; Tosti, S.; De Felice, L.; Valentini, T.; Tafuri, A.; Petrucci, M. T.; Mandelli, F.
CS Department of Hematology, University La Sapienza, Rome, Italy
SO Haematology and Blood Transfusion (**1997**), 38(Acute Leukemias VI), 846-851
CODEN: HBTRDV; ISSN: 0171-7111
PB Springer
DT Journal
LA English
CC 1-6 (Pharmacology)
AB Eleven poor-risk acute myelogenous leukemia (AML) patients were treated with fludarabine + cytosine arabinoside + **granulocyte colony-stimulating factor** (FLAG). The median age was 38 (range 31-51 yr) and five patients were female. Six patients were resistant to a previous induction chemotherapy (European Organization for Research on Treatment of Cancer, EORTC, AML10 protocol), two patients had AML secondary to myelodysplastic syndrome, one had chronic myelomonocytic leukemia and two patients were in first resistant or subsequent relapse. According to the French-American-British (FAB) classification, patients presented with the following subtypes: four M4/M5, three not classifiable, two M2, one CMML, one M6. Seven patients achieved a complete remission (CR) (63%), of these four patients were MDR pos. The median time to achieve CR was 39.5 days (range 28-49 days). Four patients relapsed after 1, 2, 3, 3 mo, resp., while three patients (all MDR pos.) are still in CR after 3, 7, and 12 mo. In the authors' experience, no major toxicities were obsd. during the treatment, except mild mucositis. The authors' results confirm the feasibility of this schedule and its efficacy in poor-risk AML, suggesting a preferential role in AML patients expressing the MDR phenotype.
ST fludarabine cytosine arabinoside filgrastim multidrug resistance;

multidrug resistance granulocyte factor leukemia antitumor

IT **Leukemia**
(acute myelogenous; poor-risk acute myelogenous leukemia human patients undergoing fludarabine-cytosine arabinoside - filgrastim regimen dealing with multidrug resistance expression, **granulocyte colony-stimulating factor** priming activity and clin. response)

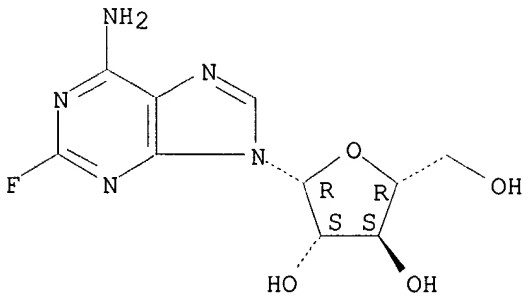
IT Antitumor agents
Multidrug resistance
(poor-risk acute myelogenous leukemia human patients undergoing fludarabine-cytosine arabinoside - filgrastim regimen dealing with multidrug resistance expression, **granulocyte colony -stimulating factor** priming activity and clin. response)

IT 71-30-7, Cytosine **21679-14-1**, Fludarabine 50986-18-0, Arabinoside 121181-53-1, Filgrastim **143011-72-7**, Colony-stimulating factor, granulocyte
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(poor-risk acute myelogenous leukemia human patients undergoing fludarabine-cytosine arabinoside - filgrastim regimen dealing with multidrug resistance expression, **granulocyte colony -stimulating factor** priming activity and clin. response)

IT **21679-14-1**, Fludarabine **143011-72-7**, Colony-stimulating factor, granulocyte
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(poor-risk acute myelogenous leukemia human patients undergoing fludarabine-cytosine arabinoside - filgrastim regimen dealing with multidrug resistance expression, **granulocyte colony -stimulating factor** priming activity and clin. response)

RN 21679-14-1 HCAPLUS
CN 9H-Purin-6-amine, 9-.beta.-D-arabinofuranosyl-2-fluoro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 143011-72-7 HCAPLUS
CN Colony-stimulating factor, granulocyte (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

=> fil reg
FILE 'REGISTRY' ENTERED AT 07:41:18 ON 22 OCT 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 20 OCT 2002 HIGHEST RN 463296-69-7
DICTIONARY FILE UPDATES: 20 OCT 2002 HIGHEST RN 463296-69-7

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> d sta que l55
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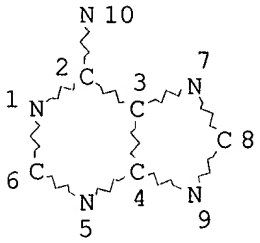
L54 STR



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NSPEC IS RC AT 10
CONNECT IS M1 RC AT 1
CONNECT IS M1 RC AT 6
CONNECT IS M1 RC AT 9
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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 1
NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE
L55 56975 SEA FILE=REGISTRY SUB=L53 CSS FUL L54

100.0% PROCESSED 98126 ITERATIONS 56975 ANSWERS
SEARCH TIME: 00.00.02

=> fil medline
FILE 'MEDLINE' ENTERED AT 07:56:20 ON 22 OCT 2002

FILE LAST UPDATED: 19 OCT 2002 (20021019/UP). FILE COVERS 1958 TO DATE.

On June 9, 2002, MEDLINE was reloaded. See HELP RLOAD for details.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the

MeSH 2002 vocabulary. Enter HELP THESAURUS for details.

THIS FILE CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE SUBSTANCE IDENTIFICATION.

=> d all tot

L217 ANSWER 1 OF 5 MEDLINE
AN **2000224990** MEDLINE
DN **20224990** PubMed ID: **10763920**
TI Oral administration of muscle derived small molecules inhibits tumor spread while promoting normal cell growth in mice.
AU Bar-Yehuda S; Farbstein T; Barer F; Ohana G; **Fishman P**
CS Laboratory of Clinical and Tumor Immunology, The Felsenstein Medical Research Center, Tel-Aviv University, Rabin Medical Center, Petach-Tikva, Israel.
SO CLINICAL AND EXPERIMENTAL METASTASIS, **(1999)** 17 (6) 531-5.
Journal code: 8409970. ISSN: 0262-0898.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200004
ED Entered STN: 20000505
Last Updated on STN: 20000505
Entered Medline: 20000427
AB Tumor metastases are extremely rare in striated muscles. This is surprising given the fact that this tissue constitutes 60% of body weight. The present study focuses on small molecules produced and secreted by muscle cells which possess anti-cancer activity in vivo. Recently we have shown that a low molecular weight fraction (< 1000 Dalton) of skeletal muscle cell conditioned medium (muscle factor-MF), markedly inhibits the proliferation of carcinoma, sarcoma or melanoma cell lines in vitro. The MF exerts a cytostatic effect on tumor cell growth and arrests the cells in the G0/G1 of the cell cycle. However, normal cell proliferation, such as bone marrow and fibroblasts, was stimulated following incubation with MF. In this study, the effect of orally administered MF on melanoma and sarcoma growth was examined in mice. The administration of MF to mice inoculated intravenously with melanoma (B16-F10) or sarcoma (MCA-105) cells, resulted in a statistically significant inhibition of metastatic lung foci. In a different model, melanoma was induced in the foot pad and after development of a local lesion, the leg was amputated. A prolonged survival time was observed in the MF treated groups. Since the MF stimulated bone marrow cell proliferation in vitro, we decided to test its efficacy as an inhibitor of the myelotoxic effect exerted by chemotherapy, in vivo. MF, administered after chemotherapy, restored the number of white blood cells and yielded an increased percentage of neutrophils compared with the decline in these parameters after administration of chemotherapy alone. Thus, it is indicated that MF exerted a systemic anti tumor and chemoprotective effect when given orally. It can be concluded that it is bioavailable and is not biodegradable in the digestive system. MF may be considered as a potential therapy for the prevention of tumor spread.
CT Check Tags: Animal; Male; Support, Non-U.S. Gov't
Administration, Oral
Antineoplastic Agents: AE, adverse effects
Bone Marrow Cells: DE, drug effects
Bone Marrow Cells: PA, pathology
Cell Division: DE, drug effects
Cell Line
Lung Neoplasms: DT, drug therapy
*Lung Neoplasms: PC, prevention & control
*Lung Neoplasms: SC, secondary
Mice

Mice, Inbred C57BL
*Muscle Proteins: AD, administration & dosage
Muscle Proteins: PD, pharmacology
Sarcoma, Experimental: DT, drug therapy
*Sarcoma, Experimental: PA, pathology
CN 0 (Antineoplastic Agents); 0 (Muscle Proteins)

L217 ANSWER 2 OF 5 MEDLINE
AN 1999397465 MEDLINE
DN 99397465 PubMed ID: 10470864
TI **Granulocyte colony-stimulating factor** and drugs elevating extracellular adenosine act additively to enhance the hemopoietic spleen colony formation in irradiated mice.
AU Hofer M; Pospisil M; Netikova J; Znojil V; Vacha J
CS Institute of Biophysics, Academy of Sciences of the Czech Republic, Brno.
SO PHYSIOLOGICAL RESEARCH, **(1999)** 48 (1) 37-42.
Journal code: 9112413. ISSN: 0862-8408.
CY Czech Republic
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199910
ED Entered STN: 19991014
Last Updated on STN: 19991014
Entered Medline: 19991007
AB The effects of combined administration of two drugs elevating extracellular adenosine, namely dipyridamole (DP) and adenosine monophosphate (AMP), and **granulocyte colony-stimulating factor** (**G-CSF**) on hemopoietic stem cells in vivo were investigated. The experiments were performed on mice using the endogenous spleen colony formation in gamma-irradiated animals as an endpoint. The results have shown that DP and AMP act additively with **G-CSF** to enhance spleen colony formation and thus the erythroid repopulation of the spleen. These findings indicate that the signaling pathways of **G-CSF** and drugs elevating extracellular adenosine can interact at the level of primitive hemopoietic stem cells. The enhancement of hemopoiesis-stimulating effects of **G-CSF** by DP and AMP, which are low-priced and clinically available drugs, could improve the cost-effectiveness of the therapy with **G-CSF**.
CT Check Tags: Animal; Male; Support, Non-U.S. Gov't
***Adenosine: ME, metabolism**
Adenosine Monophosphate: PD, pharmacology
Cell Count
Cobalt Radioisotopes
Colony-Forming Units Assay
Dipyridamole: PD, pharmacology
Erythroid Progenitor Cells: CY, cytology
*Extracellular Space: ME, metabolism
Gamma Rays
***Granulocyte Colony-Stimulating Factor: PD, pharmacology**
*Hematopoiesis: DE, drug effects
Hematopoietic Stem Cells: CY, cytology
Mice
*Spleen: CY, cytology
*Whole-Body Irradiation
RN **143011-72-7 (Granulocyte Colony-Stimulating Factor)**; 58-32-2 (Dipyridamole); **58-61-7 (Adenosine)**; 61-19-8 (Adenosine Monophosphate)
CN 0 (Cobalt Radioisotopes)

L217 ANSWER 3 OF 5 MEDLINE
AN **1998343581** MEDLINE

DN **98343581** PubMed ID: **9679987**
TI Adenosine and other low molecular weight factors released by muscle cells inhibit tumor cell growth.
AU **Fishman P**; Bar-Yehuda S; Vagman L
CS Laboratory of Clinical and Tumor Immunology, The Felsenstein Medical Research Center, Tel-Aviv University, Rabin Medical Center, Petach-Tikva, Israel.. pfishma@ibm.net
SO CANCER RESEARCH, **(1998 Jul 15)** 58 (14) 3181-7.
Journal code: 2984705R. ISSN: 0008-5472.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199808
ED Entered STN: 19980820
Last Updated on STN: 19980820
Entered Medline: 19980807
AB In this study, we investigated the basis of the resistance of muscles to tumor metastases. We found that a low molecular weight fraction (Mr <3000) of skeletal muscle cell-conditioned medium (MCM) markedly inhibits the proliferation of carcinoma, sarcoma, or melanoma cell lines in vitro. The MCM exerts a cytostatic effect on tumor cell growth and arrests the cells in G0/G1 of the cell cycle. However, normal cell proliferation of cells such as bone marrow cells or fibroblasts was found to be refractory to the influence of the MCM. A reduction in melanoma growth was observed in mice treated with the MCM. Adenosine was identified as one of the active components in the MCM by using high-performance liquid chromatography separations, mass spectra, and nuclear magnetic resonance analyses. At a concentration of 4 microM, equal to that found in the MCM, adenosine inhibits the proliferation of tumor cell lines (Nb2 lymphoma, K-562 leukemia, and LNCaP prostate carcinoma cells) while stimulating the proliferation of normal murine bone marrow cells. By similar methods, additional inhibitory components were detected in the MCM in a molecular mass range of 600-800 Da. The ability of adenosine and other low molecular weight components to specifically inhibit tumor cell growth in vitro and in vivo may account for the resistance of muscle to tumor metastases.
CT Check Tags: Animal; Human; Support, Non-U.S. Gov't
***Adenosine: PD, pharmacology**
Cell Cycle: DE, drug effects
*Cell Division: DE, drug effects
*Culture Media, Conditioned: PD, pharmacology
Mice
*Muscles: CH, chemistry
*Neoplasms: PC, prevention & control
Rats
Tumor Cells, Cultured: DE, drug effects
RN **58-61-7 (Adenosine)**
CN 0 (Culture Media, Conditioned)

L217 ANSWER 4 OF 5 MEDLINE
AN 1998208194 MEDLINE
DN 98208194 PubMed ID: 9548416
TI **Granulocyte colony-stimulating factor** and drugs elevating extracellular adenosine synergize to enhance haematopoietic reconstitution in irradiated mice.
AU Pospisil M; Hofer M; Znojil V; Netikova J; Vacha J; Hola J; Vacek A
CS Institute of Biophysics, Academy of Sciences of the Czech Republic, Brno.
SO EUROPEAN JOURNAL OF HAEMATOLOGY, **(1998 Mar)** 60 (3) 172-80.
Journal code: 8703985. ISSN: 0902-4441.
CY Denmark
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals

EM 199804
ED Entered STN: 19980507
Last Updated on STN: 19980507
Entered Medline: 19980428
AB The activation of **adenosine receptors** has recently been demonstrated to stimulate haematopoiesis. In the present study, we investigated the ability of drugs elevating extracellular **adenosine** to influence curative effects of **granulocyte colony-stimulating factor** (**G-CSF**) in mice exposed to a sublethal dose of 4 Gy of 60Co radiation. Elevation of extracellular **adenosine** in mice was induced by the combined administration of dipyridamole, a drug inhibiting the cellular uptake of **adenosine**, and **adenosine** monophosphate (AMP), an **adenosine** prodrug. The effects of dipyridamole plus AMP, and **G-CSF**, administered either alone or in combination, were evaluated. The drugs were injected to mice in a 4-d treatment regimen starting on d 3 after irradiation and the haematopoietic response was evaluated on d 7, 10, 14, 18 and 24 after irradiation. While the effects of **G-CSF** on the late maturation stages of blood cells, appearing shortly after the completion of the treatment, were not influenced by dipyridamole plus AMP, positive effects of the combination therapy occurred in the post-irradiation recovery phase which is dependent on the repopulation of haematopoietic stem cells. This was indicated by the significant elevation of counts of granulocyte-macrophage progenitor cells (GM-CFC) and granulocytic cells in the bone marrow (d 14), of GM-CFC (d 14), granulocytic and erythroid cells (d 14 and 18) in the spleen, and of neutrophils (d 18), monocytes (d 14 and 18) and platelets (d 18) in the peripheral blood. These effects suggest that the repopulation potential of the combination therapy lies in a common multilineage cell population. The results of this study implicate the promising possibility to enhance the curative effects of **G-CSF** under conditions of myelosuppressive states induced by radiation exposure.
CT Check Tags: Animal; Female; Male; Support, Non-U.S. Gov't
***Adenosine: ME, metabolism**
*Adenosine Monophosphate: PD, pharmacology
Blood Platelets: DE, drug effects
Dipyridamole: PD, pharmacology
Drug Synergism
*Erythrocytes: DE, drug effects
***Granulocyte Colony-Stimulating Factor: PD, pharmacology**
Granulocyte-Macrophage Colony-Stimulating Factor: DE, drug effects
Granulocyte-Macrophage Colony-Stimulating Factor: RE, radiation effects
***Granulocytes: DE, drug effects**
Granulocytes: RE, radiation effects
***Hematopoietic Stem Cells: DE, drug effects**
Hematopoietic Stem Cells: RE, radiation effects
Lymphocytes: DE, drug effects
Mice
Mice, Inbred BALB C
Mice, Inbred CBA
Monocytes: DE, drug effects
Platelet Aggregation Inhibitors: PD, pharmacology
Receptors, Purinergic P1: ME, metabolism
RN **143011-72-7 (Granulocyte Colony-Stimulating Factor)**; 58-32-2 (Dipyridamole); **58-61-7 (Adenosine)**; 61-19-8 (Adenosine Monophosphate); 83869-56-1 (Granulocyte-Macrophage Colony-Stimulating Factor)
CN 0 (Platelet Aggregation Inhibitors); 0 (Receptors, Purinergic P1)

L217 ANSWER 5 OF 5 MEDLINE
AN 96068733 MEDLINE
DN 96068733 PubMed ID: 7579335

TI Synergistic effect of **granulocyte colony-stimulating factor** and drugs elevating extracellular adenosine on neutrophil production in mice.

AU Pospisil M; Hofer M; Znojil V; Vacha J; Netikova J; Hola J
CS Institute of Biophysics, Academy of Sciences of the Czech Republic, Brno, Czech Republic.

SO BLOOD, **(1995 Nov 15)** 86 (10) 3692-7.
Journal code: 7603509. ISSN: 0006-4971.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199512
ED Entered STN: 19960124
Last Updated on STN: 19960124
Entered Medline: 19951219

AB Experimental evidence suggests that the activation of purinoceptors by extracellular adenosine can modulate proliferation and/or differentiation of hematopoietic cells. The present study was undertaken to investigate the potential interactions of this system of intercellular signaling with the effects of **granulocyte colony-stimulating factor** (**G-CSF**) on granulopoiesis in vivo.
Elevation of extracellular adenosine in normal mice was induced by the joined administration of dipyridamole, a drug inhibiting the cellular uptake of adenosine, and adenosine monophosphate (AMP), an adenosine prodrug. The effects of dipyridamole, AMP, and **G-CSF**, administered either alone or in combinations, were evaluated. The agents were injected to mice in a 4-day regimen, and the hematologic endpoints were determined 24 hours after the completion of the treatment. It was shown that the effects of **G-CSF**, ie, increases in peripheral blood neutrophils, granulocyte-macrophage progenitor cells (GM-CFC), and morphologically determined granulocytic cells in femoral marrow and a decrease in the marrow erythroid cells, can be enhanced by the combination of dipyridamole plus AMP administered 30 minutes before **G-CSF**. Furthermore, it was ascertained that the stimulatory action of dipyridamole plus AMP was expressed particularly at lower doses of **G-CSF** (1.5, 3, and 4.5 micrograms/d). At higher doses of **G-CSF** (6 and 9 micrograms/d), the interactions were no more evident. When combining dipyridamole, AMP, and 3 micrograms of **G-CSF**, peripheral neutrophils increased approximately 3.9- to 4.5-fold compared with an approximate 2.2-fold increase induced by **G-CSF** alone. The results indicate the possible therapeutic potential of combination therapy with **G-CSF** and drugs increasing extracellular adenosine.

CT Check Tags: Animal; Male; Support, Non-U.S. Gov't
***Adenosine: BI, biosynthesis**
*Adenosine Monophosphate: PD, pharmacology
Cell Differentiation: DE, drug effects
Cell Division: DE, drug effects
*Dipyridamole: PD, pharmacology
Drug Synergism
*Extracellular Space: ME, metabolism
Filgrastim
***Granulocyte Colony-Stimulating Factor: PD, pharmacology**
*Hematopoiesis: DE, drug effects
***Hematopoietic Stem Cells: DE, drug effects**
Mice
Mice, Inbred C57BL
Mice, Inbred CBA
***Neutrophils: CY, cytology**
Recombinant Proteins: PD, pharmacology

RN 121181-53-1 (Filgrastim); **143011-72-7 (Granulocyte Colony-Stimulating Factor)**; 58-32-2 (Dipyridamole); **58-61-7 (Adenosine)**;

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     61-19-8 (Adenosine Monophosphate)
CN   0 (Recombinant Proteins)


=> d his

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L87 (     10891)SEA FILE=REGISTRY SUB=L85 CSS FUL L86
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L105          52 S (CL OR CI)()IB MECA
L106         139 S IB MECA
L107          34 S AB MECA
L108        1501 S APNEA NOT SLEEP?
L109          25 S 2 CHLORO ()(N6 OR N 6)() 3 IODOBENZ? ADENOSIN? 5 N METHYLURON
L110          48 S (N6 OR N 6)()3 IODOBENZ? ADENOSIN? 5 N METHYLURONAMIDE
L111          49 S (N6 OR N 6)()2 4 AMINOPHENYL()(ETHYLADENOSIN? OR ETHYL ADENOS
L112           7 S (N6 OR N 6)()4 AMINO 3 IODOBENZ? ADENOSIN? 5 N METHYLURONAMID
L113           1 S N 2 4 AMINOPHENYL ()(ETHYLADENOSIN? OR ETHYL ADENOSIN?)
L114          49 S (N6 OR N 6)() 2 4 AMINOPHENYL ()(ETHYLADENOSIN? OR ETHYL ADEN
L115           0 S 6 N 2 4 AMINOPHENYL()(ETHYLADENOSIN? OR ETHYL ADENOSIN?)
L116         108 S A3AR OR A2AR OR A3AR
L117       11994 S ADENOSIN?(L)RECEPTOR?
                 E ADENOSINE RECEPTOR/CT
L118        2069 S E6,E7,E8,E9,E10
L119          46 S A2AAR OR A2BAR
                 E E5+ALL
L120        4563 S E8,E7+NT
L121           4 S L103 AND L104-L115
L122          18 S L103 AND L116-L120
                 E LEUKOPEN
L123        3002 S E4-E9,E12
                 E LEUCOPEN
L124        1037 S E4-E7,E11
                 E LEUKOCYTOPEN
L125         970 S E2,E4,E5,E8
                 E LEUCOCYTOPEN
L126          28 S E4
                 E LEUKOCYTOPEN/CT
                 E E4+ALL
L127         807 S E3
L128        3392 S E3/BI OR E4/BI OR E5/BI OR E6/BI
L129         164 S L103 AND L123-L128
L130           3 S L121,L122 AND L129
                 E BONE MARROW/CT
                 E E3+ALL
L131       21852 S E16+NT
L132       51298 S E16/BI
                 E E20+ALL
L133       31615 S E6+NT
                 E E30+ALL
                 E E22+ALL
L134       19391 S E4,E3+NT
L135       16238 S E3/BI
                 E E10+ALL
L136       22302 S E5+NT
                 E E29+ALL
L137        1555 S E4
                 E E13+ALL
L138        2838 S E5,E6,E4+NT
L139           9 S L104-L115 AND L123-L129
L140          13 S L104-L115 AND L131-L138
L141         129 S L116-L120 AND L123-L128,L131-L138
L142        5496 S L52,L60,L99
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     FILE 'REGISTRY' ENTERED AT 07:16:53 ON 22 OCT 2002
L143      10433 S L67,L78 NOT L52,L60,L99
L144      10432 S L143 NOT (58-55-9 OR 118-00-3 OR 958-09-8 OR 58-61-7)
L145      10431 S L144 NOT 53-84-9
L146       2046 S L145 NOT (P/ELS OR SQL/FA OR (PMS OR MNS OR MXS OR IDS)/CI)

     FILE 'HCAPLUS' ENTERED AT 07:18:29 ON 22 OCT 2002
L147       5695 S L146
L148      10759 S L142,L147
L149         57 S L148 AND L103
L150       2126 S L148 AND L116-L120
L151        335 S L148 AND L123-L128,L131-L138
L152         18 S L150 AND L151
L153         37 S L149 AND L150,L151
L154          4 S L152 AND L153
L155         36 S L121,L122,L130,L139,L140,L154
L156         53 S L149,L153 NOT L155
L157        114 S L141 NOT L155,L156
                E CAN/CS,PA
                E CAN-FIT/CS,P
                E CAN-FIT/CS,PA
                E CAN FIT/CS,PA
L158          7 S E5-E10
                E FISHMAN P/AU
L159         86 S E3-E6,E15
L160          6 S L158,L159 AND L103
L161          6 S L160 AND L155-L157
L162        136 S L155-L157 AND (PD<=19990910 OR PRD<=19990910 OR AD<=19990910)
L163         26 S L155 AND L162
L164          6 S L163 AND (HEMATOPO? OR CANCER OR BONE MARROW OR CELL PROLIFER
L165         25 S L162 AND L156
L166         15 S L165 AND (MARROW OR RANDOMIZ? OR MYELO? OR LEUKEM?)/TI
L167          8 S L166 NOT FLAG/TI
                SEL DN AN 2 3 5 8
L168          4 S L167 NOT E1-E12
L169         13 S L161,L164,L168
L170         85 S L162 NOT L163-L169
L171         34 S L170 AND (1 OR 15 OR 63)/SC
L172         13 S L171 AND (MAST CELL OR PROLIFERAT? OR HEMATOPO? OR EXPANSION
                SEL DN AN 1 3
L173          6 S E3-E18
L174         19 S L169,L173 AND L101-L142,L147-L173
                SEL HIT RN

     FILE 'REGISTRY' ENTERED AT 07:39:39 ON 22 OCT 2002
L175         11 S E19-E29
L176          1 S L175 AND L1
L177         10 S L175 NOT L176

     FILE 'REGISTRY' ENTERED AT 07:40:25 ON 22 OCT 2002

     FILE 'HCAPLUS' ENTERED AT 07:40:44 ON 22 OCT 2002

     FILE 'REGISTRY' ENTERED AT 07:41:18 ON 22 OCT 2002

     FILE 'MEDLINE' ENTERED AT 07:41:38 ON 22 OCT 2002
L178        202 S L104-L107,L109-L115
L179         44 S APNEA AND L178
L180        202 S L178,L179
L181      10611 S L103
L182          3 S L180 AND L181
                E RECEPTORS, PURINERGIC/CT
                E E3+ALL
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L183        8925 S E12+NT
L184       17516 S ADENOSINE/CT,CN
L185       12727 S L117,L116,L119
L186       12025 S L123-L126
                 E LEUCOCYTOP
L187          91 S E4-E6
                 E LEUKOCYTOP
L188         518 S E4-E8
                 E LEUKOCYTOP/CT
                 E E4+ALL
                 E E2+ALL
L189       19264 S E5+NT
L190       10323 S E5/BI
                 E LEUKOPEN
L191       10566 S E4-E14,E22-E24
L192           1 S E25
                 E LEUCOPEN
L193        1483 S E4-E16
L194           0 S L180 AND L187-L193
L195         426 S L181 AND L183-L186
L196        1919 S L181 AND L187-L193
L197         410 S L195 AND L196
L198         112 S L197 AND BONE MARROW
                 E BONE MARROW/CT
                 E E5+ALL
L199      154734 S E6+NT
                 E BONE MARROW/CT
                 E E3+ALL
L200       43251 S E4+NT
L201          82 S L197 AND L199,L200
L202         123 S L198,L201 AND PY<=1999
L203           0 S L183-L185 AND L202
L204         632 S L183-L185 AND L199,L200
L205          11 S L183-L185 AND L187-L193
L206          10 S L204,L205 AND L181
L207           4 S L206 AND PY<=1999
L208           3 S L207 NOT MRNAS/TI
                 E FISHMAN P/AU
L209         364 S E3-E9,E14
L210           3 S L209 AND L181
L211           4 S L209 AND L180
L212          13 S L209 AND L183-L185
L213           0 S L209 AND L186-L193
L214          41 S L209 AND L199-L200
L215          44 S L210-L214 AND PY<=1999
                 SEL DN AN 1 3
L216           2 S L215 AND E1-E6
L217           5 S L208,L216

     FILE 'MEDLINE' ENTERED AT 07:56:20 ON 22 OCT 2002

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L220 ANSWER 1 OF 5 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2002:391201 BIOSIS
DN PREV200200391201
TI A3 adenosine receptor as a target for cancer therapy.
AU **Fishman, Pnina (1)**; Bar-Yehuda, Sara; Madi, Lea; Cohn, Ilan
CS (1) Laboratory of Tumor and Clinical Immunology, Felsenstein Medical Research Institute, Rabin Medical Center, Petach-Tikva, 49100: pfishman@post.tau.ac.il Israel
SO Anti-Cancer Drugs, (June, 2002) Vol. 13, No. 5, pp. 437-443. http://www.anti-cancerdrugs.com/. print. ISSN: 0959-4973.
DT General Review
LA English
AB Targeting the A3 adenosine receptor (A3AR) by adenosine or a synthetic agonist to this receptor (IB-MECA and CI-IB-MECA) results in a differential effect on tumor and on normal cells. Both the adenosine and the agonists inhibit the growth of various tumor cell types such as melanoma, colon or prostate carcinoma and lymphoma. This effect is specific and is exerted on tumor cells only. Moreover, exposure of peripheral blood mononuclear cells to adenosine or the agonists leads to the induction of **granulocyte colony stimulating factor** (**G-CSF**) production. When given orally to mice, the agonists suppress the growth of melanoma, colon and prostate carcinoma in these animals, while inducing a myeloprotective effect via the induction of **G-CSF** production. The de-regulation of the Wnt signaling pathway was found to be involved in the anticancer effect. Receptor activation induces inhibition of adenylyl cyclase with a subsequent decrease in the level of protein kinase A and protein kinase B/Akt leading to activation of glycogen synthase kinase-3beta, a key element in the Wnt pathway. The oral bioavailability of the synthetic A3AR agonists, and their induced systemic anticancer and myeloprotective effect, renders them potentially useful in three different modes of treatment: as a standalone anticancer treatment, in combination with chemotherapy to enhance its therapeutic index and myelprotection. It is evident that use of the A3AR agonist for increasing the therapeutic index of chemotherapy may also invariably give rise to myeloprotection and vice versa. The A3AR agonists are thus a promising new class of agents for caner therapy.
CC Cytology and Cytochemistry - Animal *02506
Cytology and Cytochemistry - Human *02508
Pathology, General and Miscellaneous - Therapy *12512
Pharmacology - General *22002
Pharmacology - Clinical Pharmacology *22005
Neoplasms and Neoplastic Agents - Pathology; Clinical Aspects; Systemic Effects *24004
Neoplasms and Neoplastic Agents - Therapeutic Agents; Therapy *24008
BC Hominidae 86215
Muridae 86375
IT Major Concepts
Pharmacology; Tumor Biology
IT Chemicals & Biochemicals
1-deoxy-1-[6-[[(3-iodophenyl)methyl]amino]-9H-purine-9-yl]-N-methyl-beta-D-ribofuranuronamide: A-3 adenosine receptor agonist, antineoplastic - drug; 2-chloro-N-6-(3-iodobenzyl)adenosine-5'-N-methyluronamide: A-3 adenosine receptor agonist, antineoplastic - drug; A-3 adenosine receptor: anticancer drug therapy target, tumor expression
ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia; Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia
ORGN Organism Name
HCT-116 cell line (Hominidae): drug treatment, human colon cancer cell

line, in-vivo xenograft study; nude mouse (Muridae): animal model
ORGN Organism Superterms
Animals; Chordates; Humans; Mammals; Nonhuman Mammals; Nonhuman Vertebrates; Primates; Rodents; Vertebrates

L220 ANSWER 2 OF 5 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:577692 BIOSIS
DN PREV200100577692
TI A3 adenosine receptor agonist prevents chemotherapy induced myelotoxicity via the induction of **G-CSF**.
AU **Fishman, P. (1)**; Ohana, G. (1); Bar-Yehuda, S. (1); Barer, F. (1)
CS (1) Laboratory of Clinical and Tumor Immunology, Felsenstein Medical Research Center, Rabin Medical Center, Tel-Aviv University, Petach-Tikva, 49100 Israel
SO International Journal of Molecular Medicine, (2001) Vol. 8, No. Supplement 1, pp. S14. print.
Meeting Info.: 6th World Congress on Advances in Oncology, and the 4th International Symposium on Molecular Medicine Hersonissos, Crete, Greece October 18-20, 2001
ISSN: 1107-3756.
DT Conference
LA English
SL English
CC General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals *00520
Biochemical Studies - General *10060
Pathology, General and Miscellaneous - Therapy *12512
Blood, Blood-Forming Organs and Body Fluids - Blood, Lymphatic and Reticuloendothelial Pathologies *15006
Pharmacology - General *22002
Pharmacology - Blood and Hematopoietic Agents *22008
Toxicology - General; Methods and Experimental *22501
Toxicology - Pharmacological Toxicology *22504
Toxicology - Antidotes and Preventative Toxicology *22505
Neoplasms and Neoplastic Agents - Pathology; Clinical Aspects; Systemic Effects *24004
Neoplasms and Neoplastic Agents - Therapeutic Agents; Therapy *24008
Neoplasms and Neoplastic Agents - Blood and Reticuloendothelial Neoplasms *24010
BC Muridae 86375
IT Major Concepts
Pharmacology; Toxicology; Tumor Biology
IT Diseases
cancer: neoplastic disease; chemotherapy induced myelotoxicity: blood and lymphatic disease, prevention and control, toxicity
IT Chemicals & Biochemicals
2-chloro-N-6-(3-iodobenzyl)adenosine-5'-N-methyl uronamide: A-3 adenosine receptor agonistic activity, antidote - drug, **granulocyte colony stimulating factor** inducer, hematologic - drug; cyclophosphamide: antineoplastic - drug, hematologic toxicity; doxorubicin: antineoplastic - drug, hematologic toxicity
IT Alternate Indexing
Neoplasms (MeSH)
IT Miscellaneous Descriptors
Meeting Abstract
ORGN Super Taxa
Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia
ORGN Organism Name
mouse (Muridae): animal model
ORGN Organism Superterms
Animals; Chordates; Mammals; Nonhuman Mammals; Nonhuman Vertebrates;

Rodents; Vertebrates
RN 50-18-0 (CYCLOPHOSPHAMIDE)
23214-92-8 (DOXORUBICIN)

L220 ANSWER 3 OF 5 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:513049 BIOSIS
DN PREV200100513049
TI The A3 adenosine receptor as a new target for cancer therapy and chemoprotection.
AU **Fishman, Pnina (1)**; Bar-Yehuda, Sara; Barer, Faina; Madi, Lea; Multani, Asha S.; Pathak, Sen
CS (1) Laboratory of Clinical and Tumor Immunology, Faculty of Medicine, Tel-Aviv University Sackler, Felsenstein Medical Research Center, Rabin Medical Center, Petach-Tikva, 49100: pfishman@post.tau.ac.il Israel
SO Experimental Cell Research, (October 1, 2001) Vol. 269, No. 2, pp. 230-236. print.
ISSN: 0014-4827.
DT Article
LA English
SL English
AB Adenosine, a purine nucleoside, acts as a regulatory molecule, by binding to specific G-protein-coupled A1, A2A, A2B, and A3 cell surface receptors. We have recently demonstrated that adenosine induces a differential effect on tumor and normal cells. While inhibiting in vitro tumor cell growth, it stimulates bone marrow cell proliferation. This dual activity was mediated through the A3 adenosine receptor. This study showed that a synthetic agonist to the A3 adenosine receptor, 2-chloro-N6-(3-iodobenzyl)-adenosine-5'-N-methyl-uronamide (Cl-IB-MECA), at nanomolar concentrations, inhibited tumor cell growth through a cytostatic pathway, i.e., induced an increase number of cells in the G0/G1 phase of the cell cycle and decreased the telomeric signal. Interestingly, Cl-IB-MECA stimulates murine bone marrow cell proliferation through the induction of **granulocyte-colony-stimulating factor**. Oral administration of Cl-IB-MECA to melanoma-bearing mice suppressed the development of melanoma lung metastases (60.8+-6.5% inhibition). In combination with cyclophosphamide, a synergistic anti-tumor effect was achieved (78.5+-9.1% inhibition). Furthermore, Cl-IB-MECA prevented the cyclophosphamide-induced myelotoxic effects by increasing the number of white blood cells and the percentage of neutrophils, demonstrating its efficacy as a chemoprotective agent. We conclude that A3 adenosine receptor agonist, Cl-IB-MECA, exhibits systemic anticancer and chemoprotective effects.
CC Cytology and Cytochemistry - General *02502
Cytology and Cytochemistry - Animal *02506
Cytology and Cytochemistry - Human *02508
Biochemical Studies - General *10060
Biochemical Studies - Nucleic Acids, Purines and Pyrimidines *10062
Biochemical Studies - Proteins, Peptides and Amino Acids *10064
Endocrine System - General *17002
Neoplasms and Neoplastic Agents - Pathology; Clinical Aspects; Systemic Effects *24004
BC Hominidae 86215
IT Major Concepts
Biochemistry and Molecular Biophysics; Cell Biology; Tumor Biology
IT Parts, Structures, & Systems of Organisms
bone marrow: blood and lymphatics, immune system; neutrophils: blood and lymphatics, immune system
IT Diseases
cancer: neoplastic disease; melanoma: neoplastic disease
IT Chemicals & Biochemicals
2-chloro-N-(3-iodobenzyl)-adenosine-5'-N-methyl-uronamide: A3 adenosine receptor agonist; A3 adenosine receptor; adenosine; **granulocyte colony stimulating factor**
IT Alternate Indexing

Neoplasms (MeSH); Melanoma (MeSH)
IT Miscellaneous Descriptors
chemoprotection
ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia
ORGN Organism Name
B-16-F10 cell line (Hominidae): melanoma cell line
ORGN Organism Superterms
Animals; Chordates; Humans; Mammals; Primates; Vertebrates
RN 58-61-7 (ADENOSINE)
143011-72-7 (GRANULOCYTE COLONY STIMULATING FACTOR)

L220 ANSWER 4 OF 5 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2000:253371 BIOSIS
DN PREV200000253371
TI Adenosine acts as a chemoprotective agent by stimulating **G-CSF** production: A role for A1 and A3 adenosine receptors.
AU **Fishman, Pnina (1)**; Bar-Yehuda, Sara; Farbstein, Tamar; Barer, Faina; Ohana, Gil
CS (1) Laboratory of Clinical and Tumor Immunology, Rabin Medical Center, The Felsenstein Medical Research Institute, Petach-Tikya, 49100 Israel
SO Journal of Cellular Physiology, (June, 2000) Vol. 183, No. 3, pp. 393-398. print..
ISSN: 0021-9541.
DT Article
LA English
SL English
AB Adenosine, a ubiquitous nucleoside, is released into the extracellular environment from metabolically active or stressed cells. It binds to cells through specific A1, A2A, A2B and A3 G-protein-associated cell-surface receptors, thus acting as a signal-transduction molecule by regulating the levels of adenylyl cyclase and phospholipase C. In this study, we showed that adenosine stimulates the proliferation of murine bone marrow cells in vitro. Pharmacological studies, using antagonists to the adenosine receptors, revealed that this activity was mediated through the binding of adenosine to its A1 and A3 receptors. This result was further corroborated by showing that the two selective A1 and A3 receptor agonists, N-cyclopentyladenosine (CPA) and 1-deoxy-1-(6-(((3-iodophenyl)methyl)amino)-9H-purin-9-yl)-N-methyl-beta-D-ribofuranuronamide (IB-MECA) respectively, induced bone marrow cell proliferation in a manner similar to adenosine. Adenosine's interaction with its A1 and A3 receptors induced **G-CSF** production, which led to its stimulatory effect on bone marrow cells. These results were confirmed in vivo when we demonstrated that low-dose adenosine (0.25 mg/kg) acted as a chemoprotective agent. When administered after chemotherapy, it restored the number of leukocytes and neutrophils to normal levels, compared with the decline in these parameters after chemotherapy alone. It is suggested that low-dose adenosine, already in clinical use, may also be applied as a chemoprotective agent.
CC Biochemical Studies - Nucleic Acids, Purines and Pyrimidines *10062
Blood, Blood-Forming Organs and Body Fluids - Blood and Lymph Studies *15002
Endocrine System - General *17002
Immunology and Immunochemistry - General; Methods *34502
BC Muridae 86375
IT Major Concepts
Biochemistry and Molecular Biophysics; Immune System (Chemical Coordination and Homeostasis)
IT Parts, Structures, & Systems of Organisms
A1 adenosine receptors; A3 adenosine receptors; bone marrow cells: blood and lymphatics, immune system
IT Chemicals & Biochemicals

adenosine: chemoprotective agent; **granulocyte colony stimulating factor**: production stimulation
ORGN Super Taxa
Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia
ORGN Organism Name
mouse (Muridae): animal model, male
ORGN Organism Superterms
Animals; Chordates; Mammals; Nonhuman Mammals; Nonhuman Vertebrates; Rodents; Vertebrates
RN 58-61-7 (ADENOSINE)
143011-72-7 (GRANULOCYTE COLONY STIMULATING FACTOR)

L220 ANSWER 5 OF 5 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1999:191711 BIOSIS
DN PREV199900191711
TI Adenosine acts as a chemoprotective agent: A new mechanism.
AU **Fishman, P.**; Bar-Yehuda, S.; Farbstein, T.; Bahaar, F.
CS Felsentein Med. Res. Cent., Sackler Fac. Med., Tel Aviv Univ., Rabin Med. Cent., Petah Tikva 49100 Israel
SO Proceedings of the American Association for Cancer Research Annual Meeting, (March, 1999) Vol. 40, pp. 677.
Meeting Info.: 90th Annual Meeting of the American Association for Cancer Research Philadelphia, Pennsylvania, USA April 10-14, 1999 American Association for Cancer Research
. ISSN: 0197-016X.
DT Conference
LA English
CC Pharmacology - General *22002
Cytology and Cytochemistry - Animal *02506
Cytology and Cytochemistry - Human *02508
Biochemical Studies - General *10060
Blood, Blood-Forming Organs and Body Fluids - Blood Cell Studies *15004
Blood, Blood-Forming Organs and Body Fluids - Lymphatic Tissue and Reticuloendothelial System *15008
Immunology and Immunochemistry - General; Methods *34502
General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals *00520
BC Hominidae 86215
Muridae 86375
IT Major Concepts
Pharmacology
IT Parts, Structures, & Systems of Organisms
bone marrow cell: blood and lymphatics, immune system
IT Chemicals & Biochemicals
adenosine: chemoprotective agent; A1 adenosine receptor; **G-CSF [granulocyte-colony stimulating factor]**
IT Miscellaneous Descriptors
Meeting Abstract
ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia; Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia
ORGN Organism Name
human (Hominidae); murine (Muridae)
ORGN Organism Superterms
Animals; Chordates; Humans; Mammals; Nonhuman Mammals; Nonhuman Vertebrates; Primates; Rodents; Vertebrates
RN 58-61-7 (ADENOSINE)

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3	LET.	1

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